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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

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DEPARTMENT OF THE ARMY
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DEPARTMENT OF THE INTERIOR
FEDERAL ENERGY REGULATORY COMMISSION
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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, FEBRUARY 16, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2:40 p.m. in room SD–192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Abdnor, Domenici, Johnston, Stennis, and Burdick.

DEPARTMENT OF THE ARMY

OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

OFFICE OF THE CHIEF OF ENGINEERS—CIVIL

STATEMENT OF WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

ACCOMPANIED BY:
- LT. GEN. J. K. BRATTON, CHIEF, CORPS OF ENGINEERS
- COL. PAUL KAVANAUGH, EXECUTIVE DIRECTOR, CIVIL WORKS
- BORY STEINBERG, CHIEF, PROGRAMS DIVISION, CIVIL WORKS

OPENING REMARKS

Chairman HATFIELD. The hearing will come to order.

First of all, my apologies; we had a vote on the floor so that is why I was late.

The purpose of our meeting is to review the fiscal year 1984 budget request of the programs and activities of the Army Corps of Engineers. As our first witness, we welcome Mr. William Gianelli, Assistant Secretary of the Army for Civil Works.

Mr. Secretary, we look forward to your full review of the Corps' budget request.

In addition, we are also pleased to welcome Lt. Gen. Joseph K. Bratton, Chief of Engineers, Col. Paul Kavanaugh, Executive Director of Corps Civil Works Directorate, and Mr. Bory Steinberg, Chief of the Directorate's Programs Division.

Mr. Gianelli, your full statement will be included in the record, but before you do that, I would like to yield to my good colleague and friend, the ranking minority member of this committee, Senator Johnston, for any opening remarks he may have.

Senator JOHNSTON. Mr. Chairman, I have no remarks except to welcome our good friends here today. They do such a good job for the country and the Corps. Mr. Chairman, I look forward to working with you on the new jobs bill which, as I understand it, will be centered heavily around the type of work we are familiar with in this committee, which is where the jobs bill ought to start to build America's infrastructure.

Chairman HATFIELD. Thank you very much.

Senator Stennis, do you have any opening remarks?

Senator STENNIS. Not at this point, Mr. Chairman.

Chairman HATFIELD. Senator Abdnor?

Senator ABDNOR. I, too, would like to welcome Secretary Gianelli to our hearing. I am looking forward to being with him tomorrow in our Water Resources Committee. I am sure I will have questions later. Welcome to the committee.

Chairman HATFIELD. Thank you, Senator.

Mr. Secretary, you may proceed now to summarize as you wish.

PREPARED STATEMENT

Mr. GIANELLI. Thank you very much, Mr. Chairman, members of the committee. I would like to proceed by asking that my complete statement be placed in the record of this hearing.

Chairman HATFIELD. It will be, without objection.

[The statement follows:]

STATEMENT OF ASSISTANT SECRETARY WILLIAM R. GIANELLI

I. INTRODUCTION

I am pleased to appear before your subcommittee today to discuss the Army's Civil Works Program and FY 1984 Budget recommendations. The Chief of Engineers, Lieutenant General Joseph K. Bratton, the Director of Civil Works, Major General John Wall, who today makes his first appearance before you as Director, and the Chief of Programs, Bory Steinberg, are with me and will assist in presenting testimony.

With your permission, Mr. Chairman, I would like to proceed by asking that my complete statement and that of General Bratton be placed in the record of these hearings. I would like to summarize portions of my complete statement, and I ask that the Chief be permitted also to summarize his statement, following which we will be available to answer the subcommittee's questions.

A year ago, in my first appearance before you, I expressed the hope that the subcommittee would be able to support our proposals, particularly those proposals to enable new water projects to go to construction in these times of severe budgetary limitations. The Department has further proposals in this and other important areas for FY 1984, and I again hope that these will merit the subcommittee's support.

My statement addresses seven topics:

> Implementation of the Continuing Resolution for FY 1983;

> FY 1984 budget summary including status of FY 1982 concerns;

> Innovative Financing and Cost Sharing;

> The Corps' Recreation Program;

> Regulatory Relief;

> Other policy initiatives and concerns; and

> Mount St. Helens.

II. IMPLEMENTATION OF THE CRA FY 1983

The Continuing Resolution for FY 1983, P.L. 97-377, according to our reading, makes available $2.968 billion for the Army Civil Works Program. This amount, which is exclusive of permanent appropriations, includes $180 million more than it is estimated the Corps will need this year for the Construction, General appropriation account and not enough for the O&M, General and MR&T accounts. Accordingly, a transfer of $140 million from Construction, General to O&M ($110 million) and to MR&T ($30 million) is considered necessary and desirable and is proposed for consideration by Congress in a FY 1983 supplemental transmitted with the budget documents for FY 1984. The remaining $40 million has been deferred and would be available for productive use in FY 1984.

The "current rate of operations" criterion, which dictates the amount available for O&M, General under the CRA, provides less than the funds required to carry out a normal operation and maintenance program for civil works projects. Approval of the proposed transfer would assure a sound and effective Civil Works Program for FY 1983.

III. FY 1984 BUDGET SUMMARY INCLUDING STATUS OF FY 1982 CONCERNS

The net FY 1984 budget request for the Civil Works Program totals $2.102 billion. This net request takes into account offsetting receipts estimated at $492 million, of which $454 million would be realized under revised navigation and recreation user fee legislation supported by the Administration. The gross request thus amounts to $2.594 billion which, together with the $40 million available from this year's deferral, is approximately a four percent reduction from last year's request. This is the first time that the request for Operation and Maintenance, General funds exceeds those requested for Construction, General. However, the budget includes new starts in several categories which were not included in last year's budget and provides a level of operation and maintenance funds that is more consistent with that of prior years. There are several highlights of the FY 1984 budget, together with an update on some FY 1982 concerns, which I will address, and General Bratton will elaborate on some of the details of the FY 1984 Budget.

FY 1984 Budget Highlights

Construction, General - The $906 million requested for construction, together with the $40 million deferral, will fund a variety of construction and design activities. These include: maintenance of schedules, insofar as possible, on all 107 projects currently physically under construction which will be continuing or completing in FY 1984, including 95 regular construction projects, 10 major rehabilitation projects, one reimbursement project, and one dam safety assurance project; initiation of 5 new construction starts and proposed second year funding of the new starts recommended in the FY 1983 budget amendment, except for Bradley Lake, which will be constructed by the State of Alaska, at a savings to Federal taxpayers of about a half billion dollars; further engineering design on five potential new construction starts; and follow-on funding for 24 projects -- 18 regular construction, 4 rehabilitation, and 2 reimbursement projects -- which are not currently physically under construction but which either (1) should be underway and either continuing or completing in FY 1984, or (2) are funded in FY 1984 only for further engineering and design, with a construction decision to be made at a later date.

Funds budgeted for the categories of projects enumerated above provide for, among other activities, initiation of construction or initiation or continuation of engineering and design on a total of 34 items of work, namely, four resumptions of construction projects, 25 separable elements of ongoing projects, and five partially funded but unstarted projects; and they provide $20 million for recreation facilities being constructed at 100 percent Federal expense at 10 ongoing projects. The total Federal cost of these recreation facilities will be $87 million.

Two projects which received an allocation in prior years but which are not provided for in the budget are the Blue River Channel and Canaveral Harbor Extension. Construction has not yet started on either of these projects. Their combined total cost is about $200 million. It seemed prudent, in light of the stringent budgetary situation, and the low level of non-Federal participation in project financing — the Federal Government would bear 90 percent of the cost of one project and 85 percent of the cost of the other under historic formulas — to approach local sponsors as to their willingness to increase their share of project financing to enable the start of construction.

Operation and Maintenance, General - The $1.161 billion requested for Operation and Maintenance, General is $150 million higher than last year's request and will provide sufficient funds to operate and maintain deep draft harbors and inland waterways consistent with commercial traffic requirements. Overall, the Corps of Engineers will operate and maintain approximately 700 projects, including 266 navigation, 264 flood control, 20 local protection and 71 multiple purpose power projects. The navigation projects comprise shallow and deep draft channels and harbors as well as a number of small boat harbors serving mainly commercial vessels.

Flood Control, Mississippi River & Tributaries - The $290 million requested for MR&T is the largest amount ever budgeted for the Flood Control Program for the Lower Mississippi Valley from Cape Girardeau, Missouri, to the Gulf of Mexico and its contiguous basins. The budget includes funds to continue construction of 11 construction features, including the Old River Auxiliary Structure. The level of maintenance proposed for the MR&T program is approximately 20 percent higher than in the FY 1983 budget. This reflects the importance of maintaining project elements already constructed. The performance of a number of these structures in the recent December-January floods is indicative of the benefits they provide to large geographic areas in the Lower Mississippi Valley and the need to maintain them.

Status of FY 1982 Concerns

You will recall, Mr. Chairman, that last February I outlined for the subcommittee certain concerns which we had with several projects which were funded in FY 1982. In this past year, I have spent a great deal of time working with the Corps, and with interested members of Congress, in an effort to put those concerns behind us. We have made substantial progress. I would like to note the following:

Red River Waterway - A single contract was awarded last fall for Lock and Dam No. 2, which is necessary to achieve navigation to Alexandria, Louisiana. The FY 1984 budget includes follow-on funding for this contract as well as $23.7 million for channel work in pools 1 and 2 necessary to achieve navigable depths. Furthermore, we are continuing to pursue hydropower development, to be financed by non-Federal interests and to accomplish hydropower installation, where feasible, jointly with the construction of navigation facilities. The objective is to reduce the overall Federal investment while affording non-Federal interests an opportunity to develop hydropower for their own use, including the sale of power surplus to their needs.

Section 202 Project - As I indicated to you, Mr. Chairman, in my letter of November 24, 1982, we are committed to providing standard project flood protection to Williamson, West Virginia, and Pineville, Kentucky, and to undertake early action for the Barbourville Cutoff, Kentucky, project. The Corps of Engineers advises me that, based upon anticipated unobligated carryover from prior years, no additional construction funds will be required by FY 1984. The $600,000 included in the FY 1984 budget is for studies at other locations in the Section 202 area.

Yatesville - We are complying with the provisions of P.L. 97-257, the 1982 Supplemental Appropriations Act, and the provisions of P.L. 97-377, the Continuing Resolution for FY 1983. Together these Acts make available $7 million for the Yatesville project. I understand the Corps is addressing certain technical problems related to water quality. The Ohio River Division Engineer will discuss these when he testifies before the subcommittee.

San Jacinto Levee and Bautista Creek Channel - The Corps has been instructed to remedy the problems which caused the failure of the project three years ago. A contract is expected to be awarded this spring. Money is included in the budget to continue funding of the remedial measures.

Tensas - Last fall the Corps entered into an agreement with the owners of the property to purchase 10,629 acres for the Tensas River National Wildlife Refuge. The $5 million in FY 1982 funds made available to the Department of the Army for the project by P.L. 97-88, together with the $4.8 million made available to the Department of the Interior by P.L. 97-100, has been used on the project.

Snettisham - It seemed prudent a year ago to continue engineering and design on installation of the Crater Lake generator and related equipment and facilities and to defer actual construction, pending a determination on non-Federal participation in financing. In the interim, as noted earlier, the State of Alaska has made the decision to build the Bradley Lake project. Since Alaska has demonstrated the capacity to move ahead decisively on its own in the area of hydropower development, it would appear unnecessary to spend $71.6 million of the taxpayers' money to expand hydropower production at Snettisham if it can proceed on its own also.

IV. INNOVATIVE FINANCING AND COST SHARING

Background and Perspective

This subcommittee is as aware as anyone of the unfortunate course of new water project authorization and construction starts during the last decade. There were small authorization bills in 1974 and 1976, but no omnibus bill has passed in the six subsequent years. The 70's were also a period of very limited new construction starts and, for the first time, as noted earlier, Corps O&M outlays will exceed construction outlays in FY 1984.

In spite of the difficulties faced by water projects, I know you recognize that water problems are not going to go away. There are growing pressures for deep draft harbor improvements to serve the interests of international trade in general and coal exports in particular. Extensive rehabilitation of our aging waterway system is becoming increasingly urgent, while recent flood events in the Lower Mississippi Valley reflect the continuing reality of flooding and the continuing demand for flood control projects to protect human life and property. The issue which confronts the Administration and the Congress is on what terms will Federal assistance be provided to address these and other kinds of water problems in this age of great budgetary austerity. We all must deal with the budget crunch on Federal dollars. Federal money is simply not available for new initiatives nor, indeed, is it available to continue old programs at their previous levels under historic formulas. To ignore these realities invites further stalemate in the utilization of the Nation's water resources.

An increased role for the private sector is the key to having a good sound water resource investment program with less burden on Federal taxpayers. This means cost recovery programs are imperative for ongoing operation and maintenance costs of existing projects as well as for Federally-financed costs of new projects and that innovative financing is a "must" for new projects. Indeed, new work proposals of various kinds -- resumptions of construction, separable elements, and partially funded but unstarted projects as well as new construction starts -- merit case-by-case review and reasoned application of innovative financing and cost sharing.

Nine Civil Works new construction starts which would be financed in large part by non-Federal interests as opposed to traditional funding from the general fund of the Treasury were proposed in the President's amended budget request for FY 1983, but this request has not been acted upon by Congress. However, as I previously indicated, the FY 1984 budget includes $19.5 million for the second year requirements for these projects in expectation that construction will start in FY 1983.

We would be the first to agree that comprehensive reform of national water policy is important and desirable, particularly as related to the financial aspects. As evidenced by our experience with cost recovery for navigation, the issues are complex and the interests too diverse to allow an easy agreement on comprehensive policies governing the way water projects are funded and paid for. Meanwhile, we are proposing initiation of additional projects with innovative financing in FY 1984, and we hope that our new starts will clearly show that longer-term programmatic change is both possible and desirable.

We believe our new start proposals are examples of the flexibility which is possible within the existing system and the extensive opportunities there are to get underway a significant amount of new construction activity at substantially less cost to the Federal Government.

Our system of innovative financing is built on the recognition that water projects produce tangible economic benefits. We believe that if a water project represents a sound investment, an investment whose benefits exceed its costs, the beneficiaries will be able to repay its costs over the life of the project and to organize new sources of financing which do not require outlays from the Federal Government of the same magnitude as traditionally relied upon.

Some have argued that innovative financing along the lines that we have proposed favors wealthy states or communities or regions. In my view, such a charge represents a misunderstanding of what we are trying to do. Innovative financing does not favor one group or sector over another. It does, however, to be sure, favor one type of project over another. Specifically, it favors the productive projects, that is, those projects whose benefits exceed their costs. Those who believe that the water projects should return benefits greater than their costs should not have difficulty with the innovative financing concept as we have developed it. Project beneficiaries, whether they be rich or poor, will be more than able to pay for the cost of the services they receive because, even after having paid those costs, they will have enjoyed a benefit above and beyond that cost which makes them better off than they would have been had no investment been made.

We have tailored our non-Federal financing requirements to the nature of the various project outputs. For hydropower and municipal and industrial water supply, we asked for 100 percent non-Federal financing. We recognize that these services are, for the most part, now provided by the non-Federal sector using the private sector financing techniques. There is no reason that, for a meritorious Federal project, these same techniques cannot be used.

For flood control, we are asking a financial contribution of 35 percent. This reflects the fact that flood control is not a vendible service and that any repayment from beneficiaries requires the use of various tax mechanisms.

The gratifying willingness of so many of the prospective project sponsors whom we contacted to agree to supply the requested contribution gives, in our view, ample demonstration of the workability and reasonableness of the non-Federal funding objectives we have chosen for the different types of projects.

Applications in the FY 1984 Budget

The concept of innovative financing and cost sharing has guided the formulation of a number of FY 1984 Budget proposals, among them:

> New construction starts;

> Revised navigation cost recovery; *

> A reformulated general investigations program, including provision for:

  - Survey new starts,
  - Continuation of planning and engineering (CP&E) new starts, and
  - Advance engineering and design (AE&D) new starts; and

> A restructured continuing authorities program, including new construction starts.

My statement addresses the first three, and the Chief of Engineers will address the Continuing Authorities Program in his statement.

New Construction Starts - Five new construction starts are recommended for FY 1984. The five new starts -- four local flood protection projects and one small boat harbor -- have a total cost of $146 million. Under our innovative financing proposal, the Federal Government would bear $88 million or 60 percent of the cost of constructing these projects, while the non-Federal sponsors would contribute $58 million or 40 percent. Letters have been received from each of the local sponsors expressing their intention to proceed with us on the basis of our financing proposals.

For the information of the subcommittee, I am attaching a table which lists the names, total cost and Federal and local financing of the 14 new construction starts (9 in FY 1983 and 5 in FY 1984) proposed on the basis of innovative financing. The overall proposed financing for the 14 new starts is as follows:

	Traditional		Proposed	
	$Million	%	$Million	%
Federal Financing	$970	85	$300	26
Local Financing	177	15	847	74
Total*	$1147	100	$1147	100

The upfront financing which we have been seeking from non-Federal sponsors is in accord with the following percentages. The traditional percentages are shown in parentheses.

For Cost Allocated To	% Non-Federal Financing
Hydropower	100% (0%)
Municipal & Industrial Water	100% (0%)
Flood Control	35% (18% av.)
Separable Recreation	50% (50%)***
Small Boat Harbor	75%**(****)

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*Includes the Bradley Lake project, which has now been deauthorized because of the intention of the local sponsors to construct the project on their own.
**25% Federal financing is reimbursable.
***Traditional share could be either upfront or repaid over time.
****Commercial Navigation: 0% of first costs for general navigation features; recreational navigation: 50% of first costs of general navigation features allocated to recreational use.

Revised Navigation Cost-Recovery - We believe it is important to move ahead soon with new productive harbor and waterway improvements as well as with rehabilitation of key elements of our aging inland systems. For this reason we were disappointed that cost recovery legislation for neither inland nor deep-draft navigation was enacted by the last Congress. Navigation user fees are an integral part of the President's FY 1984 Program, and the Department will be submitting legislation in the near future that would generate the projected receipts for inland and deep-draft navigation contained in the FY 1984 Civil Works Budget. We are preparing and will soon introduce a new legislative proposal for deep-draft navigation. Our proposal will generate substantial annual revenues to offset annual Corps of Engineers operation and maintenance outlays and provide for significant non-Federal participation in new project financing. Finally, the new legislative proposal will provide a procedure for expediting the authorization of new projects.

We worked very hard last year to develop a practical mechanism for inland navigation user charges that would collect substantial revenues and keep all elements operating. There has been little response from the Congress or the affected industries as to the merits of our recommendations beyond the notion that the amounts to be collected were too much too soon. Our legislative proposal this year for inland waterways will provide that the major portion of the costs is paid from sources other than the General Fund of the Treasury.

I do not perceive the same level of interest in cost recovery for inland navigation as I do for deep-draft navigation. This is unfortunate because while there is not the same opportunity for major increases in the efficiency of the inland system as there is for deep draft ports, there are increasing pressures for capacity expansion at specific system elements, such as Gallipolis on the Ohio, where tows are subject to long delays. Moreover, there are major demands for replacement and rehabilitation of older elements on the Upper Mississippi, the Ohio, the Allegheny, and the Monogehela systems.

A Reformulated General Investigations Program - The program for General Investigations which we are proposing for FY 1984 differs from the current year program in two important respects. First, we have included funds on a selected basis to initiate new studies: eight surveys, eight CP&Es and two AE&Ds. No new studies were proposed in FY 1983. Second, pending resolution of the issues of cost sharing and user fees, we are concentrating our planning and engineering efforts, both with respect to studies underway and new studies, on those investigations which we believe ultimately will result in projects being built. Based upon indications from local sponsors, the CP&E new starts appear to have a reasonable chance of implementation pursuant to cost sharing formulas being discussed. The new surveys would be conducted in two phases, as I indicated a year ago, and FY 1984 funding would complete the first, or reconnaissance, phase of the survey at 100 percent Federal cost.

There is evidence, Mr. Chairman, that too much money has been spent on studies that have not produced implementable projects. An analysis which we made last year of the results of studies completed by the Corps of Engineers during the period FY 1973-81 indicates that, during the nine years covered by the analysis, the Corps completed 462 studies at a total cost of $186 million. Of the 462 completed studies, 258 were pronounced "unfavorable", that is, they contained no recommendation for Federal action. The Corps spent $91.1 million preparing these unfavorable reports. There were 204 "favorable" reports completed by the Corps during FY 1973-81. The Corps spent $94.4 million on these reports and recommended authorization of projects costing $13 billion. In addition, only 38 of the 204 favorable reports have been authorized, only six projects costing $110 million have been built, while seven others costing about a billion dollars are under construction.

The lack of concrete results cited above also has been noted by the GAO. In a recently published report to Congress entitled, "Sharing the Cost of Making Federal Water Project Feasibility Studies -- A Financing Alternative", the GAO reports that over the last 17 years Federal agencies have spent a lot of money on water project feasibility studies that were discontinued or recommended no action because the costs of the potential solution exceeded the benefits or the local entity or community did not support the solution. I believe the GAO is right when it suggests that planning funds were wasted studying projects which proved uneconomical and which the local people would not support. The GAO is on target too when it recommends cost sharing for feasibility studies as a necessary step in the right direction. Add to this the fact that a decade has gone by since major water project authorization legislation has been enacted by Congress, and it would appear evident that water projects are not moving ahead under the historic cost sharing formulas.

The Department of the Army, as I have indicated, made several proposals last year to Congress, in the form of an innovatively financed package of new construction starts for FY 1983 and cost recovery legislation for deep draft harbors and inland waterways, which were designed to get sound water projects moving again. These proposals have not been acted upon. Under such circumstances, and given the unproductive nature of the planning process in recent years, we have proposed reformulation of the General Investigations Program.

Specifically, the Department of the Army is proposing in FY 1984 that overall General Investigations funding be reduced 15 percent, from $129 million in FY 1983 to $110 million in FY 1984. Funding for continuation of planning and engineering has been held close to its FY 1982 level. Nonetheless, in addition to the 18 new starts, the $110 million requested does provide for continuation of 122 surveys, 19 CP&E studies and 25 AE&D projects. It is my view that the Federal Government should bear the full study costs of the 8 CP&E new starts and the 19 ongoing CP&E investigations.

V. THE CORPS' RECREATION PROGRAM

Background

Today Civil Works projects of the Army Corps of Engineers make a significant contribution towards meeting the Nation's demand for water-based recreational opportunities. Facilities available at these projects provide an array of diversified activities -- ranging from the usual fishing, boating, picnicking and hiking to the more unique activities such as nature and educational centers, hunting and camping. Moreover, much of the resources required to provide these recreational opportunities have involved, and continue to involve, Federal expenditures of money and manpower. Specifically, the Corps:

> Operates and maintains over 2000 recreation sites at 442 projects. This involved 2,400 workyears of effort and an expenditure of $125 million in FY 1982; and

> Develops new recreation sites and facilities, some during construction of a project and others after project completion -- when the need grows for more sites -- under the Recreation Facilities at Completed Projects (Code 710) Program. In FY 1982, the Corps spent $12.8 million on construction of new recreation facilities under the Code 710 Program.

User fees collected by the Corps offset about 6 percent of recreation

O&M expenditures in FY 1982. Until recently, few of the new recreation facilities developed by the Corps during construction have been cost shared because most projects under construction were authorized before 1965, that is, prior to PL 89-72, the Federal Water Project Recreation Act. For cost sharing agreements negotiated before FY 1983, the non-Federal costs generally are being repaid over time, not on a matching basis. It would appear that a partnership approach, involving greater non-Federal participation in the Corps' recreation program, needs to be developed to assure continuation of the high quality recreation experiences delivered by Corps projects.

Applications of Partnership Approach in FY 1984 Budget

The FY 1984 budget incorporates several proposals which should help move us in the right direction. Specifically, we are proposing:

> User fees to enable the Corps to collect recreation fees on the same basis as other Federal water agencies;

> Restoration of 100% Federal financing of certain limited recreation facilities at ongoing construction projects;

> New criteria for the Code 710 Program together with a "transition" program of new starts in FY 1984; and

> Continued efforts to reduce O&M costs at recreation areas which are not cost effective.

I will address each of these.

Recreation User Fees - The Department of the Army is submitting legislation that would authorize the collection of certain fees at most Corps recreation areas. Comparable to that now available to other Federal agencies, the authority would permit the recovery of a larger percentage of operation and maintenance costs from those individuals who actually use the Corps' recreation facilities. With enactment of the proposed legislation, the amount currently collected annually from the users of Corps' recreation facilities will increase. It is estimated that collection of the fees will result in net receipts of $16 million in FY 1984 with annual net receipts of $16 million in subsequent years. These amounts would, in turn, be available for appropriation to fund the Corps' recreation programs, thereby reducing the burden on the General Fund of the Treasury.

100% Federal Financing of "Exceptions" - For projects budgeted in FY 1983 for construction, no contracts for recreation construction facilities at new sites were scheduled, pending execution of agreements with local interests to provide upfront financing for 50 percent of the separable recreation construction costs and to bear 100 percent of recreation operation and maintenance costs. This policy affected 31 ongoing construction projects where recreational development was scheduled for construction at 100 percent Federal costs. The estimated construction cost of the recreation facilities which were initially deferred in the FY 1983 budget was $275 million, all Federal. Further analysis of these projects, on a case-by-case basis, however, has indicated that exceptions to the 50/50 policy are appropriate and have been approved for ten of the 31 affected projects. The approved exceptions total $87 million, and will enable the Corps, among other things, to meet commitments it made to local sponsors and complete partially constructed recreational facilities to achieve benefits. The $188 million in unscheduled recreation facilities development includes $117 million at the ten projects with approved exceptions to the new policy. Moving ahead with the exceptions will permit construction of recreation facilities at 100 percent Federal cost during FY 1984. Some $20 million has been included in the FY 1984 budget for the first contracts.

Code 710 Program - The FY 1984 budget also includes $8.0 million for recreational developments at completed projects. These funds include $3.5 million for sanitation improvements at Corps-managed recreation areas and $4.5 million required to reimburse local interests who, by the end of FY 1984, basically will have completed the installation of recreational facilities in accordance with existing signed agreements. In light of the current budget austerity, it is my intent to budget for only those new developments where the Federal investments, when considered on an annualized basis, would be offset by non-Federal assumption of responsibility for operation and maintenance of facilities presently operated by the Corps.

Reducing Recreation O&M Costs - As part of the effort to reduce operating costs we have closed some 403 recreation areas previously maintained at Federal expense. In most cases they were the least visitor-cost effective recreation areas in operation at the individual project. Of the 403 areas, 189 sites have been partially closed, 184 totally closed, and 30 sites made available for lease to non-Federal agencies. Some of the closures have generated an adverse public reaction, and it is our intent that closures which have had an obvious net negative impact on the local economy be reevaluated. The potential for reopening these sites depends upon such factors as local sponsor willingness to assume operation and maintenance responsibilities or to reduce costs by taking over recreational services provided by the Corps at other areas, and the contribution which Corps recreation facilities make to the local economy.

VI. REGULATORY RELIEF

Since mid-1981, we have been actively working to streamline and reform our regulatory program. Following the May 7, 1982, directive to the Corps from the President's Task Force on Regulatory Relief, steps were taken to revise interagency agreements for resolving field disputes over District Engineer permit decisions. Former agreements provided for a cumbersome four-level automatic appeal process should any one of several single purpose environmental agencies disagree with a District Engineer's decision. That process could take over a year to complete. The new agreements, reached early in July 1982, called for a one-step "elevation" process only when the Assistant Secretary of the Army (Civil Works) concurs that review is required based on criteria specified in the agreements. The new process should be completed within 90 days.

In addition, we published interim final regulations on July 22, 1982. Although these regulations had been developed prior to the President's reform initiatives, we were able to incorporate in them some of the reforms which did not require proposed rulemaking. For example, we have initiated a 60-day goal for decisionmaking on permit applications and have already made some progress toward this objective without diminishing our compliance with statutory requirements. After six months, we improved from completing 33 percent of our applications in 60 days to completing 48 percent.

We are, however, being sued on these regulations. On December 22, 1982, 16 conservation groups filed suit against the Corps. These groups claim relaxation of environmental protection has occurred. They primarily object to some of the new nationwide permits which allow the Corps to focus its regulatory effort on the most important resources, to general permits to reduce duplication with state regulatory programs, and to certain other policies governing discharges. I am struck by the fact that the plaintiffs in this litigation fail to specify any actual injuries which have occurred since these regulations were promulgated but rather rely on speculative "worst case" projections.

Soon we will be proposing additional regulations which will clarify the jurisdictional scope of the program; expand the use of general permits to eliminate unnecessary duplication with state and local controls; expedite processing and reduce unnecessary red tape; and further clarify the nationwide permit program. We are supporting an effort to revise procedures dealing with historic properties.

Later this year, we will issue final regulations, taking into account comments on these proposed regulations and the July interim final regulations.

I believe that true and lasting reform of this program will bring considerable relief to the Nation while still safeguarding water quality.

VII. OTHER POLICY INITIATIVES AND CONCERNS

Planning Guidelines

One of the major initiatives of the Administration in the water policy area has been to replace the Principles and Standards with new planning guidelines. The new Principles and Guidelines will simplify the water project planning process, give agencies greater flexibility in plan formulation and allow use of the most appropriate procedures for the estimation of benefits and costs in each planning study. It is our intent to insure that planners focus on the formulation of engineeringly sound, economically efficient and environmentally sensitive plans that will be implemented as expeditiously as possible in an era of very limited financial resources at all levels of government. In order to avoid unnecessarily delaying water projects in the planning stage, we want to require only those things which are necessary to assure a technically sound and implementable plan.

Final Presidential approval of new Principles in accordance with the requirements of the Water Resources Planning Act of 1965 occurred on February 3rd. Repeal of the Principles and Standards as Federal regulations and issuance of the guidelines are imminent.

Mitigation

The Administration's economic and environmental Principles and Guidelines for water project implementation studies affirm our commitment to environmental sensitivity in project planning and design. Justified environmental mitigation pursuant to the Fish and Wildlife Coordination Act and other environmental statutes is an integral part of project planning, implementation, and operation. Justifying mitigation remains an elusive problem in which subjective judgment plays an important part. We are concerned that, in the formulation of mitigation features for projects, careful attention be paid to the acquisition of lands for the exclusive purpose of mitigation. Before lands are taken from the private sector and from local tax rolls, we want to be sure that there are no alternatives --

specifically, better management of lands acquired for other project purposes in the interest of fish and wildlife values -- that cannot fully comply with the requirements of Federal law for mitigation. In addition, in considering the scope of mitigation requirements, full credit should be given to those features of water resources projects which enhance the environment.

Dam Safety

The Corps of Engineers, in conformance with the Federal Guidelines for Dam Safety, has a continuing program for evaluation of its existing dams as new hydrologic and seismic design criteria are developed and as new information becomes available on potential storm and runoff conditions. They have found through these efforts that a few older projects do not meet current state-of-the-art design criteria. However, all would pass the dam safety tests recently applied by the Corps to about 9,000 non-Federal dams, and all were designed and constructed according to criteria and information available at the time.

My purpose today is to alert the subcommittee to the possibility that future budget requests may include funding to upgrade projects to current design standards. The cost of this work would be allocated to project purposes as would be required of the Bureau of Reclamation by H.R. 3208, as passed by the House of Representatives in the second session, 97th Congress, a bill which would amend the Reclamation Safety of Dams Act of 1978. The cost allocated to various purposes would be cost shared and financed by non-Federal interests along the lines being discussed for new construction starts.

VIII. MOUNT ST. HELENS

The Corps' ability to respond to emergency and crisis situations was put to the test during the past year. We have just had the Mississippi Valley floods, the effects of which are still being felt. General Bratton will report to you on that situation. As you know, we also have been confronted in the past year with a series of crises at Mount St. Helens, even though it is almost three years since the May 18, 1980 eruption. The major crises have been:

> The threat of catastrophic flooding in the Toutle, Cowlitz, and Columbia rivers due to the potential uncontrolled release of waters from Spirit Lake; and

> The reduction in the level of flood protection afforded to the developed communities along the Cowlitz River such as Kelso, Longview, Castle Rock and Lexington as a result of sediment deposit in the Toutle and Cowlitz rivers.

To address the Spirit Lake problem, the Corps last fall completed an interim emergency pumping installation at a cost of $9.0 million, which was made available from the $18 million appropriated in the 1982 Urgent Supplemental. The pumping has prevented the lake level from rising further and posing a threat of overtopping with potential flooding downstream. We estimate that the lake would be over 9 feet higher than it is without the Corps pumping. Pumping will continue until Spirit Lake no longer poses a threat, and we will be proposing a long range solution during the coming year. I might add that we had to shut down our pumping for a period last week for safety reasons due to volcanic activity, but we will resume pumping as soon as it is safe to do so.

The Corps has also raised levees along the Cowlitz River to provide an additional level of flood protection. The cost of this work is $3.1 million, which has also been funded out of money provided in the Urgent Supplemental. To provide added safety, the Corps is now dredging silt material from the Toutle River. By next spring, an estimated 3.0 million yards will have been excavated at a cost of $3.85 million.

The Corps has acted decisively to mitigate the threat posed by Spirit Lake and to assist in the restoration of flood protection to population centers along the Cowlitz. At the same time, we are moving ahead with formulation of the Comprehensive Plan for protection of the area requested by the President. This plan, which is to be submitted to the President next fall, will recommend a long-term strategy for managing the threat caused by the eruption of Mount St. Helens. I look forward to working closely with the Congress in effectively implementing the plan when it is approved.

This completes my statement, Mr. Chairman.

ARMY CIVIL WORKS PROGRAM
FY 1983/84 PROPOSED NEW CONSTRUCTION STARTS
($ millions)

FISCAL YEAR 83/84 1/	PROJECT/TYPE/NAME	TOTAL CAPITAL COSTS 2/	FEDERAL FINANCING TRADITIONAL	FEDERAL FINANCING PROPOSED	LOCAL FINANCING TRADITIONAL	LOCAL FINANCING PROPOSED
	NAVIGATION SAFETY					
83	Freeport Harbor, TX (North Jetty-3700')	25.8	24.4	12.9	1.4	12.9
	SMALL BOAT HARBOR					
84	Bodega Bay, CA	4.815	2.725	1.235	2.09	3.58
	HYDROPOWER					
83	Bradley Lake, AK 3/	478.0	478.0	0	0	478.0
83	Strube Lake, OR	110.0	110.0	2.175	0	107.825
83	Bonneville Fishway, OR & WA	21.5	21.5	0.500	0	21.0
	SUBTOTAL	609.5	609.5	2.675	0	606.825
	FLOOD CONTROL					
83	Davenport, IA	49.3	42.3	30.0	7.0	19.3
83	Merced, CA	112.0	88.4	72.7	23.6	39.3
83	Kahoma Streams, HI	21.8	16.1	14.2	5.7	7.6
83	Virginia Beach, VA	5.85	4.51	3.8	1.34	2.05
84	Fairfield Co. Streams, CA	35.5	20.0	19.6	15.5	15.9
84	San Luis Rey, CA	47.4	36.1	30.6	11.3	16.8
84	Bassett Creek, MN	33.2	28.247	21.6	4.953	11.6
84	Ellicott Creek, NY	24.98	14.55	14.55	10.43	10.43
	SUBTOTAL	330.03	250.207	207.05	79.823	122.98
	MULTIPURPOSE					
83	Randleman Lake, NC	177.0	83.0	76.0	94.0	101.0
	TOTAL	1147.145	969.832	299.86	177.313	847.285

1/ Projects designated FY 1983 were included in the FY 1983 new starts budget amendment submitted to Congress by the President on May 25, 1982.

2/ 1 October 1982 prices inflated through the construction period.

3/ Project has now been deauthorized as local sponsors intend to construct the project on their own.

CONTINUING RESOLUTION FOR FISCAL YEAR 1983

Mr. GIANELLI. I would like to summarize seven topics covered in my complete statement, and I ask that the Chief be permitted also to summarize his statement, following which, Mr. Chairman, we will be available to answer the committee's questions.

The continuing resolution for fiscal year 1983, according to our reading, makes available $2.968 billion for the Army's civil works program. This includes $180 million more than is estimated the Corps will need this year for the construction, general, account, but not enough for the operation and maintenance, general, and the flood control, Mississippi River and tributaries accounts. Accordingly, a transfer of $140 million from the construction, general, account with $110 million to the operation and maintenance account and $30 million to the Mississippi River and tributaries account is considered necessary and desirable and is proposed for consideration by Congress in a fiscal year 1983 supplemental transmitted with the budget documents for fiscal year 1984. The remaining $40 million has been deferred and would be available for productive use in fiscal year 1984. Approval of the proposed transfer would assure a sound and effective civil works program for fiscal year 1983.

FISCAL YEAR 1984 BUDGET SUMMARY

The net fiscal year 1984 budget request for the civil works program totals $2.102 billion. This net request takes into account offsetting receipts estimated at $492 million, of which $454 million would be realized under revised navigation cost recovery and recreation user fee legislation supported by the administration. The gross request thus amounts to $2.594 billion, which, together with the $40 million available from this year's deferral, is approximately a 4-percent reduction from last year's request.

The $906 million requested for construction, general, together with the $40 million deferral, is the amount necessary to maintain schedule on all continuing projects included in the fiscal year 1984 budget; it also provides funds to initiate five new starts.

The $1.161 billion requested for operation and maintenance, general, is $150 million higher than last year's request and will provide sufficient funds to operate and maintain deep-draft harbors and inland waterways consistent with commercial traffic requirements.

Similarly, the $290 million requested for the Mississippi River and tributaries account includes a substantial increase in funds for maintenance. The performance of a number of existing structures in the recent December–January floods is indicative of the benefits they provide to large geographic areas in the lower Mississippi Valley and the need to maintain them.

INNOVATIVE FINANCING AND COST SHARING

This subcommittee is as aware as anyone of the unfortunate course of new water project authorization and construction starts during the last decade. There were small authorization bills in 1974 and 1976, but no omnibus bill has passed in the 6 subsequent years. The seventies were also a period of very limited new construction starts and, for the first time, Corps O&M outlays will exceed construction outlays in fiscal year 1984.

In spite of the difficulties faced by water projects, I certainly know you recognize that water problems are not going to go away. The issue which confronts both the administration and the Congress is on what terms will Federal assistance be provided to address these and other kinds of water problems in this age of great budget austerity. Federal money is simply not available for new initiatives nor, indeed, is it available to continue old programs at their previous levels under historic formulas. To ignore these realities, we believe, invites further stalemate in the utilization of our Nation's water resources.

New cost-recovery programs are imperative for ongoing operation and maintenance costs of existing projects as well as for federally financed costs of new projects and innovative financing, we believe, is a must for new projects. We are proposing initiation of five additional projects with innovative financing in fiscal year 1984, and we hope that our new starts will clearly show that longer term programmatic change is both possible and desirable.

REGULATORY REFORM

Following the May 7, 1982, directive to the Corps from the Presidential Task Force on Regulatory Relief, interagency agreements have been revised to provide a one-step resolution process and it occurs only with the concurrence of the Assistant Secretary of the Army for Civil Works. We are talking about the elevation process with respect to the section 404 permit program.

In July, we published interim final regulations which increased the use of general permits and improved the decisionmaking process without diminishing our compliance with statutory requirements. Soon we will be proposing additional regulations which will clarify the jurisdictional scope of the 404 program and expand the use of general permits to eliminate unnecessary duplication of governmental effort.

I believe that true and lasting reform of this program will bring considerable relief to the Nation while still safeguarding water quality.

MOUNT ST. HELENS

The Corps' ability to respond to emergency and crisis situations was put to the test during the past year. We have just had the Mississippi Valley floods, the effects of which are still being felt. General Bratton will report to you on that situation. As you know, we also have been confronted in the past year with a series of crises at Mount St. Helens, even though it is almost 3 years since the May 18, 1980, eruption. The major crises have been: First, the threat of catastrophic flooding in the Toutle, Cowlitz, and Columbia Rivers due to the potential uncontrolled release of waters from Spirit Lake; and, second, the reduction in the level of flood protection afforded to the developed communities along the Cowlitz River such as Kelso, Longview, Castle Rock, and Lexington as a result of sediment deposit in the Toutle and Cowlitz Rivers.

To address the Spirit Lake problem, the Corps last fall completed an interim emergency pumping installation at a cost of approximately $9 million, which was made available from the $18 million appropriated in the 1982 Urgent Supplemental. The pumping thus far has prevented the lake level from rising further and posing a threat of overtopping with potential flooding downstream.

The Corps has also raised levees along the Cowlitz River to provide an additional level of flood protection. The cost of this work is $3.1 million, which has also been funded out of the money provided in the urgent supplemental. To provide additional safety, the Corps is now dredging silt material from the Toutle River. By next spring, an estimated 3 million yards will have been excavated at a cost of $3.85 million.

Mr. Chairman, this completes my brief summary. If General Bratton could proceed, we both will be available to answer questions.

Chairman HATFIELD. Thank you, Mr. Secretary.

General Bratton, you may proceed.

STATEMENT OF LT. GEN. JOSEPH BRATTON, CHIEF, U.S. ARMY CORPS OF ENGINEERS

General BRATTON. Thank you, Mr. Chairman. It is a privilege to appear before this committee for the third year as Chief of Engineers. I propose to make a short oral statement to supplement my written testimony, which I ask be included in the record.

Chairman HATFIELD. It will be included in the record at this point.

[The statement follows:]

STATEMENT OF LT. GEN. J. K. BRATTON

INTRODUCTION

Mr. Gianelli has presented an overview of our current and proposed programs, including some of the new starts and applicable cost sharing and financial proposals that are integral to the Fiscal Year (FY) 1984 budget. I first will discuss how we propose to operate in FY 1983 under the Continuing Resolution Authority (CRA), and provide additional information on the FY 1984 budget. A table summarizing the funding levels of the individual appropriation titles for the period FY 1982-1984 inclusive is attached for the Subcommittee's ready reference. I also will report on the Corps response to recent flood emergencies, give a short status report on the Corps dredge fleet, discuss how we are complying with the changes in our employment ceilings, and report on the restructuring of our backlog.

FISCAL YEAR 1983 PROGRAM

Overview

Based on our review of the CRA for FY 1983, we have determined that the total amount of spending authority made available for the Corps of Engineers Civil Works program is $2,968 million, exclusive of permanent appropriations. This is adequate to carry out the program in an efficient manner. For each appropriation account, the amount of FY 1983 new spending authority equals the amount obligated in that account in FY 1982 - the so called "current rate." The breakdown by account of the current level leaves us short of funds in certain accounts and with excess spending authority in others. Accordingly, certain adjustments between accounts have been proposed. In addition, a $40 million deferral of excess Construction, General funds has been proposed which reduces the amount of available spending authority provided by the CRA to $2,928 million. All of these funds, plus the unobligated carryover from FY 1982, have been apportioned by the Office of Management and Budget. Four appropriation accounts warrant mention.

General Investigations

The current rate for General Investigations in FY 1983 under the CRA is $129.042 million, approximately the same as the FY 1983 budget. This amount is sufficient to continue work on 148 feasibility studies with 19 being scheduled for completion. Additionally, work will be performed on approximately 30 Continuation of Planning and Engineering Studies and 34 Advance Engineering and Design projects, of which 4 studies and 9 projects are scheduled for completion in FY 1983, respectively.

Construction, General

For Construction, General, the current rate in FY 1983 under the CRA is $1.421 billion compared with a budget request of $1.209 billion. In view of the unneeded increment in spending authority, it is proposed to transfer $140 million out of this appropriation and to defer $40 million into FY 1984. The resulting Construction, General funding for FY 1983 would be $1.241 billion and is adequate for efficient program execution this year. Included in the $140 million proposed for transfer is $110 million to the Operation and Maintenance, General account and $30 million to the Flood Control, Mississippi River and Tributaries account. With funds available in FY 1983, we will complete 25 projects.

Operation and Maintenance, General

The FY 1983 amount for Operation and Maintenance, General under the CRA is $1.024 billion. However, in order to provide for a normal operation and maintenance program, $110 million is proposed for transfer from the Construction, General account to the Operation and Maintenance, General account. With this transfer and the $13.7 million supplemental included for FY 1983 operation and maintenance pay raises enacted last October, we will be able to comply with the wording of the CRA.

Flood Control, Mississippi River and Tributaries

Approximately $263 million is available to the Mississippi River and Tributaries project for obligation under the CRA. This is $20 million less than the FY 1983 budget request. Here too, the proposed transfer of $30 million from the Construction, General account would permit us to maintain current schedules.

FISCAL YEAR 1984 BUDGET HIGHLIGHTS

Budget Perspective

The gross FY 1984 Civil Works program is $2.634 billion, to be financed by a budget request of $2.594 billion plus $40 million deferred in FY 1983. This is about $319 million less than the amount allocated in FY 1983 and about $110 million less than the FY 1983 budget. Most of the reduction in FY 1984 can be attributed to reduced requirements for continuing construction.

General Investigations

The request of $110.4 million for General Investigations in FY 1984 is a reduction of $19 million from last year's budget. The reduction reflects a decision to undertake those projects most likely to proceed to construction before spending a lot of money on preconstruction planning and to reduce investments in studies that are non-productive from the Federal point of view. However, there are 18 new starts in this account, and the amounts requested for specific continuing studies and projects represent a balance between the uncertainties of future implementation versus the real need for sound projects.

Since the inception of the Continuation of Planning and Engineering (CP&E) program in FY 1982, work on 40 projects will have been funded through FY 1984, including initiation of eight CP&E projects in FY 1984. Current schedules call for completion of work on 4 projects in FY 1983 and 5 projects in FY 1984. Meanwhile the other program, Advance Engineering and Design (AE&D), continues to decline as projects underway are completed, since there are very few active, authorized and unstarted projects left. There are 25 continuing and 2 new start AE&D projects in the budget request for FY 1984. For the CP&E and the AE&D programs to be successful, issues of cost recovery, cost sharing and project financing must be resolved. Success in this area will contribute to the maintenance of a more effective and continuous process leading from the study to the construction of a project.

Construction, General

In FY 1984 the request for Construction, General is $906 million, which, combined with the $40 million deferral, is a reduction of $263 million from the FY 1983 budget. This request permits us to maintain schedules, insofar as possible, for 121 continuing construction projects, three reimbursement projects, 14 major rehabilitation projects, one dam safety assurance project, and 5 navigation projects being kept engineeringly active pending further negotiations with local sponsors to reach acceptable financing and cost sharing arrangements. The request also includes funds for five new construction starts for which the non-Federal sponsors have agreed to provide increased cost-sharing and up-front financing. The large dollar reduction in our request compared with FY 1983 is due mainly to completion of 25 construction projects in FY 1983, and the fact that in FY 1984 12 more projects are completing and many of the others are nearing completion. For example, the request for the Tennessee-Tombigbee Waterway is $90 million, less than half of last year's request of $186 million. Finally, a significant factor contributing to the reduction was the reduced requirements based on the favorable low bids which have been experienced within the last one and a half years and the anticipated moderate future inflation rates on contracts scheduled for award in FY 1984.

Continuing Authorities Program

The subcommittee will recall that in my testimony last year I reported that there were no funds included in the FY 1983 budget to initiate construction of small new projects under the Continuing Authorities program. Instead, the money budgeted was to be used to support ongoing activities. It was clear that continuation of this trend would result in the phasing out of a program which, from our perspective, allows the Corps to be responsive to local water resources problems. To reverse the trend, the Assistant Secretary and I have worked out what we believe to be an acceptable restructuring of the Continuing Authorities program. The restructuring involves an expanded reconnaissance study at 100 percent Federal cost, introduction of cost-sharing of the detailed project report (DPR) during the preconstruction planning stage, cost-sharing and financing of construction on a basis comparable to that being discussed for similar Congressionally authorized project construction and immediate allocation of construction funds upon authorization of projects. This will apply to the preconstruction planning and construction of Section 103, 107, 205 and 208 projects.

A primary objective was to reduce the amount of money spent on preconstruction planning on projects which, in all liklihood, would not be constructed because of lack of local cooperation. This objective is responsive to the conclusions reached, and recommendations made, by GAO in a recent letter to me on the subject of improving the Corps small projects program.

The $25.3 million requested in FY 1984 for the Continuing Authorities program is adequate, and includes $9.5 million for new construction. The Continuing Authorities program, although requiring less than 5 percent of our construction budget, is one of our most productive activities. I am looking forward to the continued success of the program in meeting the important needs of local communities along the lines outlined above.

Project Operation and Maintenance Program

The largest account in the FY 1984 budget request is the $1.161 billion for Operation and Maintenance, General. The request includes funds sufficient for the continued operation and maintenance of the Corps projects at about their proposed FY 1983 levels. This includes the maintenance of deep-draft harbors, the inland waterways, and the small harbors which are primarily for commercial purposes. In addition to the Upper Kentucky River in Kentucky and the Pearl River in Mississippi, which have been placed in caretaker status, five more navigation projects will be converted to caretaker status in whole or in part in FY 1984. Projects such as these are funded at a minimal level that does not provide for lock operations because the level of commercial tonnage and/or budgetary constraints do not justify the continuation of regular operation and maintenance activities. The five additional projects to be converted to caretaker status are the Savannah River below Augusta, Georgia; the Inland Route in Michigan; a portion of the Atlantic Intracoastal Waterway at the Dismal Swamp Route in Virginia; the Fox River in Wisconsin; and the Cross-Florida Barge Canal in Florida. Funding amounting to $1.8 million is being requested for the seven projects. Reducing the operational levels to caretaker status will save some $5.9 million in FY 1984.

Currently, the Corps operates and maintains more than 600 reservoirs and lock and dam sites. At present, 29% of these structures are more than 40 years old while an additional 13% are more than 30 years old. Nearly half of our 258 lock chambers will reach their anticipated 50-year design life by the year 2000. In addition, some new lock and dams because of increasing usage will need revamping. Therefore, the need for project rehabilitation and/or upgrading to achieve current design standards can be expected to affect our future budget requests. The potential for structural repairs and rehabilitations along with our maintenance backlog are, I believe, indicative of how much we need the cost-recovery legislation discussed by Mr. Gianelli. Because of the potential for significant rehabilitation work, we propose to study the state-of-the art in the repair, maintenance, and rehabilitation of our structures through our Research and Development program starting in FY 1984. Historically, relatively little research effort has been expended on rehabilitation or maintenance work but $910,000 has been included for FY 1984. Our goal is to develop new techniques and material usage that will help reduce costs and improve the effectiveness of our maintenance program.

Flood Control, Mississippi River and Tributaries

Turning to the Mississippi River and Tributaries (MR&T) project, the FY 1984 budget request is $290 million. This request is $6 million more than the FY 1983 Budget request and approximately $3 million less than the FY 1983 program, assuming enactment of the proposed transfer of $30 million from the Construction, General Appropriation account.

The FY 1984 request provides for an increase of $15.4 million in maintenance activities over the FY 1983 Budget. This increase will allow work to continue on the levee setbacks at four locations and initiate additional levee setbacks at three sites. The continuing construction program request of $206.0 million is a decrease of about $7.5 million from the total anticipated FY 1983 amount. One construction feature warrants special mention. The main contract for the Old River Auxiliary Control Structure was awarded in October 1982 and is proceeding on schedule. The final major contract is scheduled to be awarded in April 1984, with construction scheduled to be completed during FY 1986.

LEGISLATION PROGRAM HIGHLIGHTS

Introduction

I would now like to discuss some of the legislative program highlights. The Department of the Army is developing several legislative proposals which we will be submitting to the Administration for review. This includes a proposal for mobilization authority and one for non-paid volunteers which warrant mention at this time. A third legislative proposal, to amend Section 221 of the Flood Control Act of 1970, has been approved by the Administration and I will discuss that item briefly. There are other legislative proposals under consideration.

Mobilization Authority

Recent mobilization exercises have shown that existing emergency statutes may not provide the Corps with sufficient authority to accomplish its essential engineering and construction missions during mobilization, and that some laws and regulations may actually impede our mobilization activities. The subject is under consideration for a legislative proposal which would provide: first, a statutory base for the Corps mobilization activities; second, authority to use existing funds for mobilization construction; third, authority to defer or terminate ongoing construction, operation, or maintenance of projects not deemed essential to defense mobilization needs; and fourth, relief, under specified limitations, from existing statutory and regulatory requirements determined to unduly constrain the Corps mobilization activities. These authorities would be subject to specific and firm termination dates.

Use of Non-paid Volunteer Services

Legislation also is being considered that would give the Corps authority to accept the services of individuals and nonprofit organizations who volunteer to contribute time and talent to the Corps, particularly in connection with recreation facilities. The legislation would permit us to recruit, train, and accept the services of individuals and nonprofit organizations for work at the field level. Volunteers could be used in any activity except those which would displace Corps employees, or involve law and regulatory enforcement or the policy-making functions of the Corps. The proposal would provide incidental expenses including transportation, uniforms, lodging and subsistence costs.

Section 221 Local Cooperation Agreements

Section 221 of the Flood Control Act of 1970 provides that the construction of any Corps project shall not begin until each non-Federal interest has entered into a legally enforceable agreement to furnish its required items of cooperation. This requirement has resulted in the deferral of some Corps construction work. A problem arises when states are project sponsors and their constitutions prohibit the obligation of future legislatures to appropriate funds. Consequently, we will propose legislation to amend Section 221 to permit agreements to be written which do not obligate future State legislative appropriations.

EMERGENCY MANAGEMENT

Natural Disasters

FY 1983 started with its share of natural disasters. Within the first three months of FY 1983, the Corps has been called upon many times to aid Federal, State and local officials in their efforts to minimize losses from an array of natural disasters. In November 1982, Hurricane Iwa caused extensive damages to the Hawaiian Islands of Kauai and Oahu. Damages to both Corps projects and military facilities were sustained and rehabilitations and repairs were immediately initiated at those sites as part of our recovery operations. In the first half of December 1982, widespread flooding occurred in the upper and central portions of the Mississippi River Basin, with record stages on the Illinois River and near record stages on the Mississippi River at St. Louis, Missouri. The Black and White River Basins in Arkansas and Missouri experienced record flooding and major flooding also occurred on the Arkansas River in Arkansas. A second major storm followed in late December 1982. This storm system triggered rains throughout the Mississippi River

Valley causing high river stages and flooding on the mainstem of the Mississippi River, in the Yazoo Basin in Mississippi, and in the Red and Ouachita River Basins in Louisiana. The Corps conducted flood fight activities in many of the affected areas, including levee reinforcements and localized raises, the distribution of sandbags, and the furnishing of pumps to help combat interior drainage problems in various leveed areas. In spite of these flood fight efforts, preliminary assessments indicate that extensive P.L. 84-99 rehabilitation work to many of the non-Federal levee systems will be required when conditions permit.

As a result of the Mississippi River Basin flooding, sediment deposit has caused severe shoaling in the Southwest Pass, the mouth of the Mississippi River. Two contract hopper dredges are presently employed maintaining navigation through the Pass. Similarly unseasonable dredging requirements have developed in the deep water crossings below Baton Rouge, Louisiana and a government owned dustpan dredge is now working there. On the nine-foot channel, the high stages have so far precluded any dredging requirements. However, the potential exists for abnormally high dredging needs as the high stages recede.

At the end of January a series of severe storms struck the entire California coast causing extensive beach erosion and coastal flooding. The Corps provided technical and floodfight assistance throughout the affected area, particularly in the Sacramento-San Joaquin Delta and the coastal communities of Redondo and Oceanside Beach near Los Angeles. In addition, the South Pacific Districts are responding to Federal Emergency Management Administration requests for damage assessments in 20 California counties.

It is still too early to project what sort of problems we will have this spring. Currently, the snow cover situation is spotty. For example, many portions of the Northeastern United States are bare while parts of Western Nevada have the highest recorded amounts of snow in over 30 years. As a result, hydrologists are monitoring the water supply situation nationwide, particularly in the Northeast where, as I have indicated, precipitation amounts continue below normal. As the season progresses, detailed information on snow depths and water equivalents of the snow pack will be input for long-range streamflow predictions.

Other Missions

The Corps' varied technical expertise is being increasingly used in various Federal emergency programs. Under an Interagency Agreement with the Environmental Protection Agency (EPA), we are providing design, construction, and technical assistance to help clean up the toxic and hazardous wastes in this country. We have completed one construction project in Pennsylvania ahead of schedule and under budget. During FY 1983, we expect to execute about 15 construction projects, 10 design projects, and about 30 technical assistance assignments. The actual design and construction work will be done by private firms but under Corps supervision. To help implement our assignment and provide the required expertise and capabilities, we have established a "design center" for this workload at our Missouri River Division. This "center of competence" will bring together the chemists, chemical engineers, toxicologists, and industrial hygienists that are needed to integrate chemical health and safety aspects into our assignments. We also continue to support the National Response Team activities under the National Oil and Hazardous Materials Contingency Plan together with the EPA and the Coast Guard.

The Corps of Engineers will shortly be assigned the lead responsibility for developing comprehensive emergency water plans as part of our nation's emergency mobilization preparedness capability. The function is being transferred from the Department of the Interior with the approval of the Federal Emergency Management Agency as provided under Executive Order 11490. The goal is to develop a variety of preparedness plans that would facilitate the effective management and allocation of water in meeting the essential civilian and defense needs during a broad spectrum of emergency situations. Involved in this effort will be creation of a national water data base, and training of Federal, State and local officials.

DREDGE FLEET

I now would like to provide a brief status report on our dredge fleet . Consistent with the provisions of Public Law 95 - 269 which directs that we reduce the size of the Corps fleet, I recently directed that two Corps hopper dredges be retired during this fiscal year. The remaining Corps fleet of both hopper and non - hopper dredges will continue in operation while the concept of the Corps of Engineers Reserve Fleet (CERF) is being developed and implemented. We plan to implement the CERF during the latter half of Fiscal Year 1983. The CERF parallels existing concepts of military augmentation such as the U.S. Air Force Civil Reserve Air Fleet and U.S. Navy's Sealift Augmentation Program. CERF will provide a contractual arrangement whereby private-contract dredges can be activated immediately to augment the Corps fleet in responding to national defense and emergencies. The Corps tested the concept during a recent mobilization exercise and I am optimistic that the CERF could provide a suitable reserve capability. If this is correct, it may be possible to reduce the Corps fleet of dredges below the levels recommended in my study to the Secretary of the Army. The latter involves the use of non-hopper dredges. I should point out that my study is presently under review by the Secretary and by the Office of Management and Budget. We expect a decision on the recommended levels for the minimum fleet in the near future.

MANPOWER

With respect to the FY 1984 ceiling of 28,935 full time equivalent (FTE) workyears is a reduction of 1,629 workyears from the FY 1983 ceiling of 30,564 workyears. This reduction will necessitate some consolidation of functions, and assignment of civil works personnel to military activities. However, a major change in guidance commencing in FY 1983, the single control on FTE workyears rather than separate ceilings for full-time permanent employees as opposed to all other employees. This gives us added flexibility in the management of our declining manpower resources. The 1,629 workyear reduction will require a strategy that will maintain our strengths while facing the realities of our changing workload for that year. We are currently working on a multi-faceted approach which:

- o Maintains a technically responsive and viable civil works organization capable of timely response to the directions of both the Administration and the Congress;
- o Maintains a strong Defense Mobilization Support Capability;

- o Streamlines the organization where feasible;
- o Supports military programs; and
- o Supports the "Federal Engineer" concept by providing engineering and construction expertise to other Federal Agencies.

Part of the workyear reduction will occur as we reduce the number of Corps-owned and operated dredges. Other reductions will be the result of consolidation of finance and accounting offices and of personnel offices and the contracting out of selected work formerly done in-house. For the near term, the completion of a number of construction projects reduces our requirements in that area. Therefore, I am confident that we will meet our Fiscal Year 1984 strength ceiling of 28,935 workyears without adverse effect.

AUTHORIZED, UNFUNDED CONSTRUCTION BALANCE TO COMPLETE

The General Accounting Office is reviewing the unfunded construction program under the jurisdiction of both the Corps of Engineers and the Bureau of Reclamation. As of this time, we have not received a copy of the report but it is important to indicate to this Committee that the remaining cost of construction work that reasonably could be implemented is actually considerably less than the numbers printed in recent years in the hearing books. I realize that the numbers printed are what we furnished for the record, but I feel that they are being misinterpreted. Accordingly, we are proposing certain changes in this year's presentation.

At last year's hearings, we indicated that the balance to complete after FY 1983 for active Corps projects totaled $33.4 billion. Currently, the balance to complete after FY 1984 for these projects totals $26.6 billion. However, in an effort to provide a more realistic view of the balance to complete after FY 1984, the balance has been divided into scheduled and unscheduled portions which total $10.2 billion and $16.4 billion, respectively. The scheduled portion - $4.7 billion for Construction, General and $5.5 billion for the features of the MR&T project - consists of outyear funding requirements for budgeted projects scheduled to complete after

FY 1984, including the outyear requirements for the FY 1983 and FY 1984 new construction starts. In some cases, where the balance to complete is substantial, the schedules may extend over the next two decades. However, most projects could expect to be completed in five to ten years. The bulk of the scheduled balance to complete reflects traditional cost-sharing for work already underway. The unscheduled portion consists of: (1) work that has not been funded for construction, including considerable work for parts of projects that very likely will not be budgeted due to lack of local support or other non-funding reasons; (2) unstarted separable elements having a benefit-cost ratio for that element less than 1.0 at the current interest rate; and (3) some physically unstarted projects or project elements which are not presently ready for initiation of construction and which require further design. Many projects, or elements thereof, in the unscheduled balance to complete, although currently designated as active, may eventually be deauthorized or reclassified to the deferred or inactive categories, and all that would be considered for construction would be reviewed as to the appropriate cost-sharing and financing. Some may proceed to construction at a future date, at which time they would be included in the scheduled portion of the program.

CONCLUSION

In summary, the individual appropriations are being funded to maintain, insofar as possible, our commitments on work currently underway. There appears to be a firm consensus - on the part of the Administration and the Congress - that sound projects are needed and should be pursued, since the added water resource developments are integral to the expansion of our nation's economic infrastructure. What is at dispute, however, is how these improvements are to be funded during a time of severe budgetary constraint. As Mr. Gianelli has pointed out, the willingness of the sponsors to increase their share of the cost for implementing the construction new starts reflect the value and soundness of the Civil Works projects. The inability to come up with acceptable cost sharing agreements for commercial navigation projects, either deep draft or on the inland waterways, remains an area of disappointment. The Administration's new legislative proposal which is being developed for deep draft navigation cost-recovery represents a concerted effort to allow both the project sponsors and the Corps to move ahead jointly on productive port and waterway improvements in this time of Federal budgetary austerity. It seems apparent, based on word from America's industrial sector, particularly those concerned with oil and coal, that there is a great need for these kinds of investments. The Corps has the organizational structure and the unique capabilities to meet the water resource needs of the nation. The President's Budget contains new intiatives worthy of the Subcommittee's consideration which would utilize the strength of the Corps. We urge the subcommittee to take a more direct role in resolving the current impasse in the water program.

CORPS OF ENGINEERS, - CIVILS WORKS PROGRAM

SUMMARY OF PROGRAM AMOUNTS FOR FISCAL YEARS 1982, 1983, AND 1984

($Million)

Account Title	FY 1982 (Appropriations)	FY 1983 (Appropriations)	FY 1984 Budget Request
General Investigations	137.225	129.042	110.4
Construction, General	1,429.992	1,241.405 1/ 2/	945.7 2/
Operation & Maintenance, General	1,025.355	1,133.667 1/	1161.3
Flood Control, Mississippi River & Tributaries	256.310	293.052 1/	290.0
General Expense	96.000	96.000	103.0
Flood Control & Coastal Emergency	40.000	29.877	10.0
Revolving Fund	-	-	-
Special Recreation Use Fees	4.784	4.942	6.0
Subtotal	2,989.666	2,927.985	2,626.4
Permanent Appropriations	12.191	7.400	7.7
TOTAL	3,001.857	2,935.385	2,634.1

1/ Reflects transfers of $110M to O&M, General and $30M to FC, MR&T from Construction, General.
2/ Includes $40M deferral from FY 1983 into FY 1984.

OVERALL FUNDING PERSPECTIVE

General BRATTON. Secretary Gianelli has presented to you an overview of our current fiscal year 1983 programs and proposed fiscal year 1984 programs, and I have attached to my written statement a table summarizing the funds for separate appropriation titles for fiscal years 1982, 1983, and 1984.

For the current year, I have carefully reviewed the fiscal year 1983 funding levels provided by the continuing resolution. With the transfers we are recommending, we are in an excellent position to execute our approved tasks this year in a manner consistent with congressional mandates.

With regard to the fiscal year 1984 budget request, the requested budget totals $2.594 billion, plus $40 million to be deferred from fiscal year 1983. This is about $319 million less than the amount allocated for fiscal year 1983, with most of the reduction attributed to reduced requirements for continuing construction.

GENERAL INVESTIGATIONS BUDGET REQUEST

The fiscal year 1984 request for general investigations is $110.4 million, down about $19 million, or 15 percent, from last year. Some new starts are included, but stronger emphasis has been placed on pursuing those projects most likely to result in implementable construction. The continuation of planning and engineering, and the advanced engineering and design programs continue to be emphasized, but the full fruition of these efforts can only be realized when the issues of cost sharing and cost recovery are resolved. Resolution of cost recovery on a basis satisfactory to the administration and to Congress remains a most important factor in an effective continuous process leading from identification and study of meritorious projects on through to construction.

CONSTRUCTION, GENERAL, BUDGET REQUEST

Our request for the construction, general account in fiscal year 1984 is for $906 million, which, combined with the $40 million deferral from fiscal year 1983, represents a reduction of $296 million, or 24 percent, from last year. This reduction is due principally to the fact that we will be completing projects in fiscal years 1983 and 1984 without a commensurate number of new construction starts. In this regard, the new start proposals for fiscal years 1983 and 1984 discussed by Secretary Gianelli have been carefully reviewed and found to meet all the tests. They represent sound investments with suitable cost recovery formulas, and I would recommend congressional action to approve our moving ahead on them. I believe selective annual approval of new construction efforts is an important aspect of sound national investment policy pertaining to water resources.

OPERATION AND MAINTENANCE BUDGET REQUEST

The largest amount in the fiscal year 1984 request is for the operation and maintenance, general account. Some $1.161 billion is being requested, up some $28 million, or 2.5 percent, from fiscal year 1983. This amount envisions continued operations and maintenance at about the fiscal year 1983 levels. It does provide for placing five navigation projects in caretaker status, in whole or in part, in fiscal year 1984. A particular point to be emphasized is the aging of many of our locks and dams. There is a clear need for a long-term program of rehabilitation and upgrading. The typically long lead times associated with this type of work mandate careful planning for the necessary design and scheduling, as well as an acceptable resolution to the cost recovery involved.

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT BUDGET REQUEST

Our fiscal year 1984 budget request of $290 million for the Mississippi River and tributaries project is about the same as will be available in fiscal year 1983, including the transfer of $30 million. Of special note is the continuing work on the important Old River Auxiliary Control Structure, for which we are requesting $66 million in the fiscal year 1984 budget to keep on a completion schedule for fiscal year 1986.

EMERGENCY MANAGEMENT

Fiscal year 1983 has begun with a series of natural emergencies. In November, Hurricane Iwa caused extensive damage in Hawaii. The total there is now over $300 million. In December and January tornados and flooding occurred in several sectors of the Mississippi River basin in Illinois, Missouri, Arkansas, Louisiana, and Mississippi. The Corps was directly engaged in flood fighting in these areas, and I believe when all the figures are in it will be apparent that once again the flood control work accomplished in the past has prevented far greater damage than that actually sustained. Our assessments do indicate, however, that extensive work using Public Law 84–99 funds will be required.

SOUTHWEST PASS DREDGING

One result of the Mississippi basin flooding was severe sediment deposition in the Southwest Pass to the Gulf of Mexico, necessitating special dredging operations there. Abnormal dredging will probably also be required later in the 9-foot channel areas of the Mississippi.

At the end of January a series of severe winter storms struck the California coast. We provided technical and flood fight assistance, particularly in the Sacramento-San Joaquin Delta area and in the 20 California counties declared as disaster areas.

Finally, our work continues, as Mr. Gianelli has already indicated, in the State of Washington to prevent future flooding resulting from the Mount St. Helens disaster of 1980. At the direction of the President, we are preparing a comprehensive report on long-term protective measures. We will submit that report to the White House this fall.

For your information, our fiscal year 1984 budget includes a request for flood control and coastal emergencies of $10 million. This request, together with funds available in fiscal year 1983, should be sufficient unless some severe natural disaster occurs.

CORPS DREDGE FLEET

I would like to give a brief status report on the Corps dredge fleet. Consistent with Public Law 95–269, I have provided recommendations to Secretary Gianelli and to the Office of Management and Budget concerning the size and composition of the Corps dredging fleet. We are retiring 2 more hopper dredges this year, bringing our fleet to a level of 6 hopper and 10 nonhopper dredges. During the year we will continue to develop and implement the concept of a Corps of Engineers reserve fleet, or a CERF, which we anticipate will provide a contractual arrangement whereby industry dredges would be made available to augment the residual Corps fleet in responding to national defense or emergency needs. A successful CERF could permit some further reductions in the number of Corps dredges.

EMPLOYMENT LEVEL

The Office of Management and Budget has directed full-time equivalent work-years ceiling for fiscal year 1984 of 28,935. This is down 1,629, or 5.3 percent, from this year. I anticipate this will cause some consolidation of functions and some assignment of civil works personnel to military programs. We will manage and allocate personnel resources carefully to assure maintenance of a responsive and technically competent force capable of rapid and effective professional mission accomplishment; maintenance of a strong defense mobilization capability; a capability to support regular, normal military programs; achievement of operational efficiencies; and support of the concept of the Federal engineer to provide engineering and construction expertise, where necessary, to other Federal agencies.

I am confident we can meet our fiscal year 1984 strength ceiling without significant adverse effect on our civil works program or on our employees as individuals.

AUTHORIZED, UNFUNDED CONSTRUCTION BALANCE TO COMPLETE

We have concluded that some of the data published in recent years concerning the unfunded, remaining construction work have been misinterpreted. Accordingly, we have divided the balance to complete after fiscal year 1984 figure of $26.6 billion into a scheduled portion of $10.2 billion and an unscheduled portion of $16.4 billion. We believe that only the scheduled portion represents truly realistic expectations, and that virtually all of the unscheduled projects may eventually be deauthorized or reclassified. Use of the scheduled amount alone would result in a more accurate gauge of what future budgets and programs might require and would permit a better perspective of considerations affecting future authorization.

SUMMARY

In summary, the available funds for fiscal year 1983 and those funds requested for fiscal year 1984 are sufficient to maintain our current level of operations and to meet our commitments on work now underway.

There appears to be consensus by the administration and Congress that sound water projects are needed and are of fundamental importance to the maintenance and expansion of the Nation's economic infrastructure. Full consensus has not been reached, however, on how to fund these improvements during a period of large Federal deficits. In particular, effective procedures for authorizing and funding new starts need to be formulated and agreed. Appropriate cost sharing and cost recovery are clearly elements of such a formulation. As has been stated, the administration will be submitting new legislative proposals designed to establish an economic basis for moving ahead prudently on productive port and waterway improvements. We believe this is an urgent national issue. Given the direction and resources by the administration and Congress, the Corps of Engineers today has the organizational structure and professional capabilities to move forward promptly in meeting the Nation's water resource needs.

Mr. Chairman, that concludes my prepared oral testimony.

Chairman HATFIELD. Thank you very much, gentlemen.

Mr. Secretary, I believe that your total requirement for 1984 is about $2.6 billion—that is, the full requirement of your program—and you have asked for $2.1 billion in appropriations. The differential, in part at least, the major part, some $454 million, is predicated and contingent upon enactment of legislation which would establish a system of deep-draft and inland navigation user fees—the port proposals for water users fees of the waterways.

As you know, 2 years ago when the administration made a proposal on cost sharing and water user fees, I made a counter-proposal that had some support from some of my colleagues, which, in my view, would have preserved the basic port structure of this country, instead of what I observed or what I assessed to be a tendency to destroy the basic port structure of our country as proposed by the administration. I proposed a second bill, and our cosponsorship expanded. It would set up a trust fund to help fund improvements and maintenance of the national waterway system, and we have support from colleagues of this committee—Senator Johnston, Senator Stennis, and others—because we concerned ourselves with the gulf ports, the east coast ports, the Great Lakes ports, the west coast ports, the small ports, the large ports. There are a number of Senators supporting this on a broader base. We are working on a third version that will be introduced in about another week, which will improve on earlier work that has been in the development stage for years. But, very frankly, I have no real belief that we are going to pass that bill, even though I have every expectation we will have a broader base of cosponsorship than we have had in the three separate bills.

My question to you is, if you are predicating $454 million, a half a billion dollars, program on the passage of that legislation, what would be the impact on the Corps of Engineers' activities if this legislation is not passed and, therefore, the fees derived from such legislation would not be in the coffers of the Federal Treasury?

Mr. GIANELLI. Mr. Chairman, let me see if I can respond a couple of ways.

First of all, I recognize the point you make with respect to what we tried to do last year and the year before. Obviously, that approach was not acceptable and didn't work out. Our budget this year contemplates a different approach. Our budget this year contemplates, for example, with respect to deep draft ports, that instead of recovering 100 percent of the O&M costs, we would recover 60 percent of the O&M expenditures with respect to deep-draft ports, and with respect to the inland waterway system, we would recover 70 percent. Now, we expect to have legislation that we would be recommending very shortly on behalf of the administration which would carry forth those principles with respect to O&M.

I am also hopeful, Mr. Chairman, that the proposals which the administration will submit will be more acceptable from the standpoint of the industry concerning the initial construction, and I say that with some knowledge of the dialog that has taken place within the administration on the subject, and I am hopeful that what the administration will recommend here, perhaps in the next 30 days, will go a long way toward reconciling some of the differences which I think have existed before in the industry and in the administration with respect to the proposals.

And let me say we will certainly be very pleased to work with you and your committee with respect to any of your proposals to see if we can reconcile any differences there might be between whatever the administration proposed and what, for example, your people might propose, to see whether or not we can agree on something which, perhaps, could be enacted, because I think it is acting to delay and creating some problems with respect to our navigation system.

IMPACT IF NAVIGATION RECEIPTS NOT REALIZED

Chairman HATFIELD. But, Mr. Secretary, let's assume—and we start from the premise of wanting to work out our differences, and I might say your proposed tonnage tax is a far cry from our ad valorem tax—but let's say we were able to work out those differences. I still am concerned, however, about what is going to happen to half a billion dollars' worth of work waiting the resolution of the user fee issue. I am not certain, frankly, that even if you and I, for instance, representing our two branches of government and our respective colleagues, are willing to come to some agreement, that it would be acceptable to the body of Members in the Senate, in the House, who are opposed to any cost sharing, and, therefore, I don't know what kind of battlefront we are going to face. So, I don't have any way to predict the outcome. Let's assume the worst case scenario, that we have a consensus on this issue between the administration and a group of Senators who do support a cost-sharing program, but one that is a far cry from the initial administration proposal. Let's say we go to battle in the Senate and we lose—that those who are opposed to any cost-sharing plan win the battle. Now, what happens to these half billion dollars' worth of identified work?

Mr. GIANELLI. Mr. Chairman, I think the half a billion dollars you referred to are the estimated receipts we would expect we would be able to realize with enactment of the navigation legislation for operation and maintenance. We have in our budget enough money to carry out the necessary operation and maintenance. I think where the principal impact would be, would be in the construction of the new projects. It seems to me that until we get some legislation which everyone can agree to and legislation is enacted which provides some element in the cost sharing on new construction, it is certainly going to hamper our ability to add new elements to our navigation system, whether it be deep water ports or inland navigation, and to maintain what a lot of people feel is necessary for a viable system. So, I think the major impact of failing to enact some sort of mutually acceptable legislation, would be reflected primarily in our inability to add new units to the existing system so as to maintain a viable navigation system.

Chairman HATFIELD. That would be a rather significant omission, wouldn't it?

Mr. GIANELLI. Yes, sir, it would, and I think that is very critical. I think there are a number of deep water port navigation projects that are ready to move if we can reach some understanding with respect to cost sharing so that the people would feel confident that what they agree to is going to be the rule in terms of new projects. Until that happens, I think there is going to be an element of uncertainty that is going to act to the detriment of adding to our system nationwide.

Chairman HATFIELD. Did you ask OMB to fully fund your total requirements? Did this contingency for user fees emanate from within OMB?

Mr. GIANELLI. Let me say this, Mr. Chairman. I have indicated to OMB very strongly that I feel the cost recovery approach proposed during the last 2 years was not a valid one or a feasible one and it was not going to result in any progress being made. As a matter of fact, I have made some suggestions to OMB which are far different from the legislation which the administration sponsored the last 2 years, and at this particular point in time we are waiting to get the reaction from OMB with respect to our proposals. Hopefully, they will perhaps agree with us and allow us to go ahead with a proposal which I think would be much more acceptable to the Congress and to the industry.

EMERGENCY EMPLOYMENT PROGRAM

Chairman HATFIELD. Let me approach this from another angle. Has OMB discussed with you what role the Corps could play in creating additional employment opportunities?

Mr. GIANELLI. Not specifically, no, they have not, Mr. Chairman.

Chairman HATFIELD. In other words, this is not a deduction in anticipation of acceleration of money for the jobs bill?

Mr. GIANELLI. No, that's correct. Our proposal here is strictly with respect to the need to improve the port system and maintain a viable system, and any discussions which are taking place with respect to the jobs bill is outside of what I have indicated to you here.

Chairman HATFIELD. Let me ask you two questions, then I will yield to my colleagues.

EMPLOYMENT DATA RELATED TO CIVIL WORK PROGRAMS

What is the total direct employment—if you don't have these figures, I would like to have you submit them for the record—what is the total direct employment supported by the Corps' 1984 budget request, if you could give us that?

Mr. GIANELLI. Mr. Chairman, we will supply that information.

Chairman HATFIELD. Let me add a few more questions. I would like to know the secondary employment supported by the 1984 request as well.

Mr. GIANELLI. Mr. Chairman, could I ask for clarification. By the primary employment, you mean those people that would be employed in the construction industry building the project?

Chairman HATFIELD. Yes.

Mr. GIANELLI. Secondary, you are talking about those people that might be served indirectly?

Chairman HATFIELD. Those auxiliary employments that occur as a result of direct employment. In other words, we calculate in the lumber economy, in addition to the direct employment—that is, every saw mill operation—there are some three to five other jobs that are created because of the home building that that represents in the plumber and the electrician and all these others. The multiplier impact.

Mr. GIANELLI. Very well.

Chairman HATFIELD. Third, would you also give us an estimate of the unemployment rate in the various construction trades and industries involved in the building of a typical Corps project. In other words, I want to look at the other side, not only what jobs you create, but what unemployment figures are in those various trades associated with direct employment for Corps projects. Is there a reservoir of skills ready to go on any kind of an accelerated program is what I am after.

Mr. GIANELLI. Mr. Chairman, I assume you want to apply that to the areas in which the projects might be involved, not on a nationwide basis.

Chairman HATFIELD. No, but I do want a nationwide analysis of capability that you could implement in a reasonably short period of time. I am trying to put together a jobs bill in which I feel a major part of that effort is within the public works dominion of the Corps and the Bureau of Reclamation. So there I would like to get on a nationwide basis a project-by-project analysis of where additional funding, if made available to you through a jobs bill, would have its most immediate and desirous impact on the unemployment problem.

Mr. GIANELLI. Very good. I think I understand. Could I also ask, I assume you are relating to the immediate time frame; for example, like the next year?

Chairman HATFIELD. Yes, exactly. We are talking about an emergency jobs bill which will come over here probably within the next 3 or 4 weeks.

Mr. GIANELLI. So what you are interested in is what Corps projects might come into being in the next year, not 5 years.

Chairman HATFIELD. No. In other words, just look at the capability of the Corps to respond to the problem of unemployment. What is the quickest way to put people to work, acceleration of ongoing projects, undertaking new projects which are designed and ready to go, increased emphasis on operation and maintenance, all of these things. If we gave you $2 billion or some amount over and above your current budget request and said to you, "What can you do to have the greatest and most immediate impact on the unemployment problem," what would be your response?

Mr. GIANELLI. Right, and you would indicate that ought to be in the time frame of next year.

Chairman HATFIELD. Yes. But I don't want it to be implied we are looking at the implementation 11 months from now. We want to have implementation, hopefully, in weeks.

Mr. GIANELLI. I understand. I just want to differentiate, Senator, if I could, between those projects the Corps might have that would come on line, say, 5 years from now versus those that would come on line in a matter of weeks or months, and I gather your inquiry is with respect to those projects which could be brought on line in a matter of weeks, not years.

Chairman HATFIELD. That's correct. We are talking an immediate impact within a matter of months.

Mr. GIANELLI. I think we understand.

[The information follows:]

EARLY IMPLEMENTATION

Bearing in mind the objective that you stated, of early implementation, we could not productively use $2 billion over our current budget request. To meet that kind of time objective, we would apply funds to the acceleration of ongoing projects, flood repairs, and unfunded maintenance, including dredging. The next step beyond an immediate time frame would be the initiation of new construction starts.

We have completed a project-by-project analysis of possibilities for new construction starts and the following table displays projects for which preconstruction planning is complete. If we could secure a formal section 221 contract for local cooperation under the cost-sharing and upfront financing proposals we have discussed with the sponsors, we could begin work in fiscal year 1983 on some 18 projects.

PROJECTS WITH PRECONSTRUCTION PLANNING COMPLETE

Recommended fiscal year 1983 new construction starts

Freeport Harbor (north jetty), Tex.
Strube Lake, Oreg.
Bonneville fishway, Oregon and Washington.
Davenport, Iowa.
Merced, Calif.
Kahoma streams, Hawaii.
Virginia Beach, Va.
Randleman Lake, N.C.

Recommended fiscal year 1984 new construction starts

Bodega Bay, Calif.
Fairfield vicinity streams, California.
San Luis Rey, Calif.
Bassett Creek, Minn.
Ellicott Creek, N.Y.

Engineeringly active projects

Kake Harbor, Alaska.
Jonesport Harbor, Maine.
Baltimore Harbor, Md. and Va.
Ponce Harbor, Puerto Rico.
Freeport Harbor (deepening), Tex.

EMPLOYMENT GENERATED BY CORPS BUDGET REQUEST

The employment supported by the Corps budget is estimated using the gross budget request before offsetting receipts or $2.6 billion rather than the net $2.1 billion figure. Based on the rule-of-thumb averages applicable to large numbers of jobs, the budget request would support direct employment of approximately 107,000 jobs. An equal number of secondary jobs would also be generated. A breakdown of the direct employment figure follows:

	Fiscal year 1984 budget request	Jobs/$million	Jobs[1]
General investigations	$110,400,000	35	3,900
Construction, general	[2]945,700,000	40	37,800
Operation and maintenance, general	1,161,300,000	44	51,100
Flood control, MR&T	290,000,000	40	11,600
Other appropriations	126,700,000	(3)	2,500
Total	2,634,100,000		106,900

[1] Direct employment only. Induced or secondary employment is estimated on a one-to-one basis which would generate an additional 107,000 jobs.
[2] Includes $40 million deferred from fiscal year 1983 for use in fiscal year 1984.
[3] Corps only.

RATES OF UNEMPLOYMENT

The unemployment figures for various types of construction and specific trades according to the Bureau of Labor Statistics detailed occupational index tabulations follow:

	Percent
By types of construction:	
Construction industry (total)	20.0
General building construction	22.9
General contractors (except building)	21.1
Special trade contractors	17.9
Specified	21.2
By craft:	
Asbestos leaders	22.1
Boilermakers	23.1
Bricklayers	24.9
Carpenters	22.7
Electrical workers	9.3
Operating engineers	21.2
Ironworkers	22.3
Laborers	30.4
Painters	20.9
Cement finishers	30.1
Roofers	23.4
Sheet metal workers	13.0
Plumbers and fitters	12.4
Plasterers	28.7

It is difficult to define a typical Corps project; however, the general contractors figure of 21.1 percent would probably be the most representative of Corps civil works.

ADDITIONAL QUESTIONS FROM CHAIRMAN HATFIELD

JOBS PROGRAM

Question. Do you believe that the Corps programs can help put people back to work? Are you prepared to carry out, in full, any jobs program which includes the Corps of Engineers?

Answer. A higher level of maintenance, beyond normal maintenance, could be accomplished at Corps projects in the interest of providing better service to the public, although I would discourage providing funds for make-work activities. There also is the potential for accomplishing some work this year that is budgeted in the fiscal year 1984 operation and maintenance budget.

In addition to normal operation and maintenance, which I have discussed above, there is a need to rehabilitate many older Corps structures. This is a long-term need which, like construction projects, requires advance engineering and design and, generally, could not be performed in fiscal year 1983. The only exceptions possibly could be the three new major rehabilitation projects budgeted in fiscal year 1984. Moreover, we could proceed earlier with construction of some programed recreation facilities as well as with certain levee repairs.

As you know, the fiscal year 1983 new construction starts which the President submitted to Congress in his May 25, 1982, budget amendment could be undertaken in the current fiscal year. However, Congress has not taken action on this proposal.

We, of course, are prepared to undertake any work which is both productive in that it addresses in a constructive way a water resource problem while, at the same time, it provides additional job opportunities.

Question. What activities are the most efficient in providing jobs?

Answer. In our construction, general program, the more labor-intensive projects are: Locks, dams, major rehabilitation, urban flood control, recreation facilities at completed projects, aquatic plant control, and small projects not requiring specific legislation. In our O&M program, it would be the maintenance activities such as repair of facilities, painting, and the like.

QUICKEST INITIATION OF JOBS

Question. What, in your judgment, would be the quickest way to put people to work relative to Corps of Engineers' activities, new construction starts, acceleration of ongoing work, increased emphasis on operations and maintenance, or a combination of all three?

Answer. I believe that combination of new construction starts, acceleration of ongoing and programed work, and increased operation and maintenance funding would be the quickest way to create jobs within the context of the Corps of Engineers program. I would like to point out that new construction starts, as proposed in the President's fiscal year 1983 and fiscal year 1984 budgets, incorporate increased participation by non-Federal interests in project funding. As a result, more jobs per dollar of Federal spending are created than would be the case under traditional financing formulas. More jobs are realized because, with increased non-Federal participation, more non-Federal dollars are expended per dollar of Federal expenditures. Because the Federal dollars are more highly levered under the new financing proposals we have made, more jobs are realized than would be the case under traditional approaches.

OPERATION AND MAINTENANCE BACKLOG

Question. I note in your statement, General Bratton, you indicate that nearly 30 percent of the 600 reservoirs and lock and dams operated by the Corps are more than 40 years old. What is the backlog of critical maintenance work that is waiting to be undertaken? Could you provide for the record a detailed breakout of the backlog, by major activity, including a narrative description of the work to be performed, and adverse impacts that could result, and an estimate of the numbers of jobs that could be created, both direct and indirect, if funds were provided? Also, provide similar information for the small continuing authorities program.

Answer. The budget request provides sufficient funds to operate and maintain deep-draft harbors and inland waterways consistent with commercial traffic requirements. Certain types of unfunded O&M repairs and other work which are of low priority have been deferred; the cumulative total over time now amounts to slightly over half a billion dollars. This is exclusive of major rehabilitation of our aging structures such as the inland waterway structures. These are longer term needs which would require an estimated $2 billion by the end of the century. The magnitude of these funding requirements underscores the need for early action, particularly with respect to navigation cost recovery legislation. The following table provides a breakdown of the unfunded O&M repairs and other work.

Major activity	Total cost	Narrative description of work to be performed
Dams	$49,000,000	Repair embankments, spillways, and outlet works.
Locks	59,000,000	Repair various features of lock chambers and gates.
Breakwaters and seawalls	18,000,000	Repair deteriorated breakwaters and seawalls.
Levees and floodwalls	8,000,000	Repair deteriorated levees and floodwalls.
Pumping plants	1,000,000	Repair aging, deteriorated pumps.
Bank stabilization	17,000,000	Repair deteriorated slopes.
Recreation facilities	51,000,000	Repair public-use facilities, mooring, and launching facilities.
Powerhouse	20,000,000	Generator rewinds and electrical repair.
Dredging	221,000,000	Dredging various shallow-draft and recreational harbors.
Roads and buildings	77,000,000	Repair supporting structures and access roads.

A systematic investment program to reduce this normal maintenance backlog would support about 23,000 jobs and assure that the Nation's water resource infrastructure would sustain current, as well as projected increased traffic and power-generating capacity and protect the health and safety of the increasing numbers of visitors to Corps areas.

SMALL PROJECTS BACKLOG

Listed below are small project programs with projects that could be initiated (construction contract awarded) not later than September 1983 and completed in no more than two construction seasons. The list includes only those small emergency protection, flood control, and commercial navigation projects that we could initiate in the interest of generating additional employment. Appropriations to fund the construction of those projects would support about 1,200 jobs, assuming that the associated construction period would average about $1\frac{1}{3}$ years.

Program	Number of projects	Remaining Federal cost
Section 107	13	$6,250,000
Section 205	17	21,900,000
Section 208	7	520,000
Section 14	61	8,760,000
Total		37,430,000

It should be emphasized that from a priority standpoint we would much prefer to address the needed rehabilitation of our inland waterway structures, to proceed with the recommended fiscal years 1983 and 1984 new construction starts, and to accelerate the programed construction of recreation facilities.

ADDITIONAL JOBS

Question. How long would it take the Corps to start bringing additional jobs on-line? How do you estimate the number of jobs created by a given amount of funding? Does it vary for construction and operation and maintenance? Please explain why.

Answer. The amount of time to start bringing additional jobs on-line would be dependent upon factors such as the type of project and status of planning and engineering. A project which has been designed and has plans and specifications on the shelf would take 1 to 3 months to start construction after funds were made available; however, one which required significant planning and engineering could take several years. Additional employment could be generated most quickly by increasing allocations for ongoing construction or maintenance projects where contracts could be accelerated or additional contracts could be awarded within 30 to 60 days after receipt of funds. The Corps uses a rule of thumb for estimating jobs generated by civil works activities, which ranges from 35 to 44 jobs per million dollars. This figure is useful as an average for large numbers of projects or studies, but may not be accurate for any one individual project or study. The operation and maintenance work is somewhat more labor intensive than construction. This is because it tends to be repair rather than construction. Such contracts are smaller and require smaller, less specialized equipment and more manual labor. The term "jobs" includes both seasonal and full-time employment, thus man-years of effort would be a slightly lower figure.

HIGH COST OF WATER RESOURCES JOBS

Question. The committee has heard much criticism regarding the high cost per job on water resource projects. For example, the House had provided $40 million for construction and maintenance related to the Mississippi River and tributaries project—this was in the jobs title of the continuing resolution. It was estimated that 500 additional jobs would be created by the additional funds, which works out to $80,000 per job. Do you believe this is correct? Please explain—direct only, no secondary.

Answer. The subsequent paragraphs on page 34 of House Report 97-959, entitled, "Further Continuing Appropriations, 1983," explain the additional jobs that would be created from an appropriation of $40 million to the Mississippi River and tributaries account. It mentions, in addition to the 500 jobs you cited, an additional 1,400 seasonal personnel who would have their tour of duty extended 2 months working on the two revetment plants.

JOBS GENERATED BY CIVIL WORKS ACTIVITIES

Question. What is the Corps rule of thumb on the numbers of jobs per million dollars of funds provided? Does this include necessary tools, equipment, materials, and transportation?

Answer. The Corps is currently using the following rule of thumb estimates for jobs per million dollars:

Appropriation title	*Jobs per million dollars*
General investigations	35
Construction, general	40
Operation and maintenance, general	44
Flood control, Mississippi River and tributaries	40

These figures include both governmental and nongovernmental jobs for direct on- and off-site employment. They also include an allowance for necessary tools, equipment, materials, and transportation. They do not include any allowance for induced or secondary employment.

TARGETING JOBS TO HIGH-UNEMPLOYMENT AREAS

Question. If Corps was asked to participate in a jobs stimulus effort, do you have procedures to insure that high-unemployment areas are targeted, and that contractors go to the unemployment offices to make these job opportunities available?

Answer. We have no formal procedures, but we could, of course, give higher priority to those contracts and projects which are in high-unemployment areas. Large contracts, where feasible, could be divided into smaller contracts which are more likely to be filled with local workers. While Federal contracting procedures preclude designating specific contractor hiring, it is our experience that contractor's labor usage on Corps projects is better than 75 percent local hire.

CONSTRUCTION PROGRAM DECLINE

Question. Gentlemen, this committee is very concerned with the decline in the Corps' construction. I believe that if this trend continues, we will seriously impact our ability to respond to natural disasters and defense emergencies, namely through the loss of quality engineers and technicians within the Corps of Engineers civil works program.

The construction program has fallen from $1.6 billion in 1981 to $900 million in 1984. Approximately $230 million of the $900 million budget request is for overhead (nonproductive) expenses. Over $300 million goes to six ongoing projects.

Could you and the administration support the initiation of a limited number of high-priority projects similar to those you have worked so hard on and some other critical work associated with the aging and outmoded facilities and structures operated by the Corps, but under the traditional method of cost sharing?

Answer. I do not think it is either necessary or appropriate to initiate new Corps activities under traditional financing formulas. In all areas other than inland navigation, beneficiaries should participate more in the financing of projects and, in the case of inland navigation structures, should repay a very substantial portion of the project costs over the life of the project. I think it is important to point out that with innovative financing substantially more jobs can be created per dollar of Federal expenditure than under historic formulas. So if the object is to create the maximum number of jobs with a given Federal budget, those limited Federal dollars should be spent on projects with substantial non-Federal participation in overall project financing, particularly the 13 new construction starts for which the project sponsors have expressed a willingness to enter into an innovative financing agreement.

COST OF DREDGING BY INDUSTRY

Chairman HATFIELD. One last question. As you know, I have been involved with the hopper dredge issue for a dozen years at least. Yesterday, I believe the Portland District opened the bids for the annual maintenance dredging of the southern Oregon coastal ports, and the bids received were twice the Government estimate. Now, I don't know whether that is a local situation, but I would like to have you provide for the record, if you do not know now, if that is typical across the country, because if it is, I think there is a strong need to reassess the whole reserve fleet concept. It seems to me that on cost alone we may be minimizing our ability to maintain our dredging capability and thereby the port operation. I am also concerned about the retiring of these Federal hopper dredges in light of these bids. As you know, on the west coast you are planning to retire one of the medium-size class, the *Biddle.* I understand it will be replaced by the *Essayons II.* I understand that the *Pacific* is already retired. We will have then, I believe, a total of two hopper dredges on the west coast. And I might also remind you that private industry has not moved ahead as rapidly on the west coast as they have in other parts of the country to replace the capability represented by the Corps' hopper dredge fleet. So, I would like to get an analysis of that in the context of that bid opening yesterday.

General BRATTON. I think the one yesterday is atypical rather than typical. Generally speaking, the records I have had access to over the last year have indicated much less of a differential in cost between bids or offers by industry as opposed to what the Corps might do. But I would like to do what you suggest, sir, spread this out so you can get a larger picture than just this isolated case.

Chairman HATFIELD. If you would provide that for the record.

[The information follows:]

COST OF DREDGING BY INDUSTRY

The most recent data related to contractor hopper dredge bids compared to the Government estimate is indicated in the following table. There are isolated cases where the industry bids have exceeded the Government estimates significantly; however, the converse has also been true. Nonetheless, hopper dredging is regionally sensitive and we will continue to monitor contractor bids to determine if there is a trend, on a regional basis, of inordinate differences between the bids and the Government estimates.

With regard to the west coast, our present plans include operating our two new hopper dredges to meet the west coast hopper dredging requirements. The *Essayons* and *Yaquina* will have a substantially higher production rate than the *Pacific* and the *Biddle*. That fact, along with the new Manson engineering medium-class hopper dredge *Newport* scheduled to come on-line in the May time frame, should provide an adequate capability to address the west coast needs. Once again, we will closely monitor the price trends on the west coast where competition will remain somewhat limited in terms of hopper dredges.

CORPS OF ENGINEERS HOPPER DREDGE BID OPENINGS

PROJECT FY 1982	CU YD MAINT	LOW BID	GOVERNMENT ESTIMATE	NO. BIDS	%
AMBROSE CHNL & SANDY HOOK NY	1000000	9100000	7922000	1	114
NY & NJ CHANNELS	863884	3389565	3479977	4	97
BAY RIDGE & RED HOOK CHNL NY	645328	1352282	2039402	3	66
NY-NJ CHANNELS(PERTH AMBROSE)	1078300	2285996	2743212	3	83
CHINCOTEAGUE INLET VA	131500	556500	717530	2	77
THIMBLE SHL&CAPE HENRY CHNL VA	769000	4388710	3641652	3	120
DELAWARE RV- PHIL TO SEA	1295000	2919850	4958900	2	58
IWW, C&D CANAL	1338720	6192848	5096474	1	121
YAQUINA BAY WA	225000	650000	404825	1	160
YAQUINA BAY & HARBOR WA	250000	437500	477000	2	91
COOS BAY OR	800000	980000	878200	1	111
SOUTHERN OREGON COASTAL PORTS	596000	1830000	2316416	1	79
SWINOMISH CHANNEL WA	5250	25750	44915	3	57
GRAYS HARBOR WA	1155000	1792450	2239250	3	80
SAVANNAH HARBOR GA	1307700	4297840	2412280	2	178
WILMINGTON HARBOR NC	561000	1576890	1329680	2	118
WILMINGTON HARBOR NC	524000	787000	1233523	2	63
GEORGETOWN ENT CHNL SC	280000	810000	786000	1	103
PANAMA CTY,MOBILE ENT CHL FL	809774	1896125	1639254	2	115
SAVANNAH HARBOR,GA	1308000	4297840	3510792	2	122
MOREHEAD CITY HBR(OCEAN BAR)NC	959000	2943320	2583860	1	113
WILMINGTON HBR (OCEAN BAR)NC	524000	787000	1233523	2	63
TOLEDO OUTER HARBOR OH	145000	497450	557770	2	89
CLEVELAND OUTER HARBOR OH	50000	237500	364320	2	65
OSWEGO & ROCHESTER HARBOR NY	165000	588000	514450	2	114
CUYAHOGA & OLD RIVERS OH	400000	2660000	2649000	3	100
LORAIN HARBOR OH	85000	293500	302860	4	96
UPPER MAUMEE RV.,TOLEDO HBR OH	100000	575000	703500	2	81
FAIRPORT HBR OH	45000	187750	157520	2	119
CONNEAUT HBR OH	40000	127500	129710	2	98
HURON HBR OH	110000	253570	253570	4	100
BUFFALO RIVER & HARBOR NY	250000	1083500	960270	3	112
DETROIT RIVER MI	725000	4192875	3500379	3	119
ROUGE RIVER MI	60300	324950	718575	2	45
GR HAVEN & HOLLAND HBRS MI	80800	418800	367296	1	114
HARBOR BEACH MI	323000	635300	1202893	5	52
LITTLE LK,GRD TRVRSE BAY MI	37200	150500	285196	5	52
SABINE-NECHES WTY & PASS TX	3300000	2452000	4778400	3	51
FREEPORT HARBOR TX	1204000	1257680	2410680	3	52
CORPUS CHRISTI TX	1970000	2495800	3657200	2	68
MYSTIC RV,BOSTON HBR MA	757000	2585200	3621240	5	71
HUMBOLDT HBR CA	334000	1060000	966000	1	109
ALAMEDA NAVAL AIR STATION CA	974000	1743140	2786000	5	62
MISS RVR BATON ROUGE-GULF LA	050000	1399900	1135600	2	123
MISS RV,BR-GULF,SW PASS(LEASE)LA	0	2396500	2073818	2	115
MISS RV,BR-GULF,SW PASS(LEASE)LA	0	975950	976115	2	99
CANAVERAL HBR FL(NEGOTIATED)	240000	1040840	1080000	1	96
GRAYS HBR WA	1200000	2097000	2050000	2	102
OREGON COASTAL PORTS OR	566000	2067000	815000	2	253

% - PERCENT LOW BID OF GOVERNMENT ESTIMATE

DREDGING CAPABILITY

Mr. GIANELLI. Could I respond in addition, Senator. Let me say I have had a number of communications which have expressed the same concern you are now expressing. I think the problem needs to be looked at from that perspective. I think the overall problem we have is working with the private industry to be sure we have a capability that takes care of the problem. I think the question you raise is a valid one, and that is, are we going too far with respect to the Corps' capability that we don't have enough in the private sector and Corps to take care of a problem when it arises? And also the second question is are we in effect creating a situation where the bids, because we don't have a Corps capability, might be so large it is costing considerably more to do a particular job?

Chairman HATFIELD. Well, I appreciate that.

Senator STENNIS. Gentlemen, before we conclude I want to say just a word about your jobs program proposal, before you conclude that.

Chairman HATFIELD. On the hopper dredges? I will yield to the Senator.

Senator STENNIS. The other part on jobs. I thought you were about to go into something else.

Chairman HATFIELD. I was going to yield to Senator Johnston, but would be happy to yield to the Senator from Mississippi. I was going to conclude my observation. I used to do battle with Congressman Slack from West Virginia every time we had a conference with the House on this whole question of hopper dredges. I have not objected to private industry coming into the picture, but we were held out with certain commitments and promises in the early days that were not lived up to by the private sector and I did not feel we should prematurely take ourselves out of the hopper dredge program until we had in place an online ability to perform those tasks. I still feel very strongly and I would like to have you look at your hopper dredge retirement schedule in the light of this recent bid experience because there is no sense in retiring these dredges that we don't have replacements of.

I would yield to Senator Johnston.

RELATIVE COST OF CORPS PROGRAM

Senator JOHNSTON. Thank you, Mr. Chairman.

Mr. Chairman, I want to congratulate you on what I see is a great program in the making, and that is the jobs program based around the infrastructure as opposed to a jobs program based around what I would call, or at least what some have called pejoratively, make-work jobs. We have a great deal of work to do in infrastructure, particularly in water, that is overdue, that needs doing right now. And if we are going to accelerate some kind of jobs program, it ought to be in the areas where we have the need. I don't know how far away, for example, Gallipolis lock and dam is from design, whether we could put people to work on that, but that needs to be replaced and needs to be done now, along with a whole host of other projects.

When you supply the chairman the information which he requested, would it be possible also to give an estimate by chart or by figures which show the estimated cost of projects now relative to the value of the dollar compared to a period of time in the past? For example, I have an idea that projects are being done now at greatly decreased cost on constant dollars compared to, say, 2 years ago. Am I correct on that?

Mr. GIANELLI. Yes. Let me say I am appearing before Senator Abdnor's subcommittee tomorrow. One of the questions he has asked is that very question, What is the Corps' program in terms of constant dollars? I think we might supply to you, Senator, a copy of the table, for example, making the comparison of the Corps' program going, say, since 1967. I think our table shows in terms of, say, 1965 dollars, I can tell you in advance it shows a very decreasing program, and I think that is the point that you are trying to make.

IMPACT OF INFLATION

Senator JOHNSTON. Another point is that to get a particular project done today in February 1983 costs less money than it cost in February 1982, or 1981 really, because the economy is in recession, contractors are hungry. Aren't the bids coming in lower than they would have a year or two ago?

Mr. GIANELLI. Oh, I see what you are talking about now. Yes, you are correct in terms of competition; for example, in the construction industry. I thought you were looking at a larger problem, and that is inflation. In other words, a dollar today doesn't buy what a dollar did in 1965. That is the information Senator Abdnor is requesting. We will be supplying that to him tomorrow and will supply it to you.

Senator JOHNSTON. Is there any way we can quantify, dollarwise, in water projects today as opposed to periods in the past?

Mr. GIANELLI. Yes, I think what we will supply will indicate that.

[The information follows:]

TABLE I

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

ALL APPROPRIATIONS

[In millions of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	1,293	1,293
1968	1,305	1,249
1969	1,246	1,124
1970	1,157	955
1971	1,310	1,002
1972	1,589	1,097
1973	1,952	1,190
1974	1,770	1,031
1975	1,757	927
1976	2,184	1,074
1977	2,487	1,091
1978	2,784	1,148
1979	2,790	1,096
1980	3,263	1,185
1981	3,100	1,044
1982	3,002	944
1983	2,975	844
1984	[1] 2,634	787

[1] Budget.

TABLE II

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

GENERAL INVESTIGATIONS

[In thousands of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	32,450	32,450
1968	34,445	31,332
1969	30,015	25,147
1970	41,191	31,183
1971	39,023	27,895
1972	50,714	33,116
1973	57,805	34,707
1974	56,142	32,180
1975	65,284	34,926
1976	66,836	34,490
1977	71,920	32,227
1978	107,046	46,906
1979	137,978	56,296
1980	142,145	53,391
1981	134,013	46,659
1982	137,225	41,778
1983	129,042	41,634
1984	[1] 110,400	34,901

[1] Budget.

TABLE III

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

CONSTRUCTION, GENERAL [1]

[In thousands of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	965,955	965,955
1968	967,599	921,523
1969	862,714	778,454
1970	711,992	587,058
1971	851,178	650,494
1972	1,025,084	703,844
1973	1,203,943	727,002
1974	873,589	503,399
1975	966,338	502,248
1976	1,237,151	600,460
1977	1,430,195	618,436
1978	1,537,820	620,945
1979	1,343,711	507,796
1980	1,660,966	584,957
1981	1,593,892	516,469
1982	1,429,992	434,923
1983	1,421,405	355,801
1984	[2]945,700	285,374

[1] Excludes FC MR&T.

[2] Budget.

TABLE IV

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

OPERATIONS AND MAINTENANCE

[In thousands of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	178,900.0	178,900
1968	193,000.0	190,532
1969	227,300.0	208,611
1970	261,824.9	222,986
1971	301,830.5	235,031
1972	388,519.0	274,604
1973	407,100.0	258,420
1974	426,625.0	258,822
1975	494,577.0	267,804
1976	582,073.0	291,050
1977	667,600.0	300,217
1978	768,870.0	328,051
1979	833,100.0	343,600
1980	942,100.0	356,887
1981	967,905.0	342,250
1982	1,025,335.0	336,140
1983	1,023,667.0	317,124
1984	[1]1,161,300.0	336,819

[1] Budget.

TABLE V

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

GENERAL EXPENSES

[In thousands of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	18,014.0	18,014
1968	19,515.0	18,586
1969	21,875.0	18,237
1970	25,356.6	19,483
1971	27,586.4	19,656
1972	29,723.0	19,982
1973	32,183.0	20,181
1974	35,083.0	21,903
1975	40,100.0	23,912
1976	43,700.0	23,435
1977	49,050.0	24,501
1978	60,000.0	28,494
1979	68,900.0	30,838
1980	76,800.0	31,896
1981	86,630.0	32,706
1982	96,000.0	34,236
1983	96,000.0	32,523
1984	[1] 103,000.0	32,183

[1] Budget.

TABLE VI

CORPS OF ENGINEERS APPROPRIATIONS—FISCAL YEARS 1967 THROUGH 1984

FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

[In thousands of dollars]

Fiscal year	Actual appropriation	Value in July 1965 dollars
1967	87,135	87,135
1968	87,135	84,034
1969	69,600	63,973
1970	80,820	65,615
1971	83,987	63,731
1972	86,000	59,310
1973	111,620	66,051
1974	264,600	149,147
1975	120,051	61,060
1976	205,147	100,614
1977	231,497	99,741
1978	253,081	101,340
1979	223,035	86,056
1980	210,515	77,129
1981	237,519	80,544
1982	256,310	83,475
1983	263,052	80,600
1984	[1] 260,000	83,196

[1] Budget.

RED RIVER WATERWAY

Senator JOHNSTON. For example, lock and dam 2 on the Red River, which was just put under contract, was substantially less than it would have been estimated for a year ago or two years ago. Am I correct on that? Do you know what the difference would be?

Mr. GIANELLI. Yes; we will provide that information for the record.

[The information follows:]

RED RIVER PROJECT COST ESTIMATE

The fiscal year 1983 cost estimate for construction of lock and dam No. 2 was $136.5 million. The fiscal year 1984 cost estimate based on the awarded contract is $119.3 million. This decrease reflects favorable bids received because of the recession and competition for work.

Mr. GIANELLI. I might add that the impact of the recession is a second aspect. It reflects the fact that the construction industry is pretty well competing for available projects. So, as a result, they are sharpening their pencil very much now in terms of wanting to get the work. That is absolutely true in terms of the situation as it exists now. But in addition, there is the other aspect that I think you alluded to first, and that is the fact that if you built something today, it would take a lot less dollars than if you put off ten years, for example, on the basis of some inflation. I think we can provide you some figures that will state that.

Senator JOHNSTON. Or even put it off 2 years.

Mr. GIANELLI. Yes.

Senator JOHNSTON. Not just because of the inflation, but because of the recession.

INFLATION FACTORS

Mr. GIANELLI. Yes. I will provide for the record a table which shows the impact of the recession on the inflation rates. The rates have declined, not only because of the recession but also, as noted, the competition of contractors for work.

COMPARISON OF INFLATION FACTORS, ACTUAL AND PROJECTED—FISCAL YEARS 1980–85 INCLUSIVE

Date of projections/ Type of work	Rates of change[1] (annual)—Fiscal year—					
	1980	1981	1982	1983	1984	1985
March 1980:						
Dredging	[2] 21.9	14.8	12.7	10.2	9.1	10.3
All other construction	[2] 15.1	12.3	11.3	9.5	8.8	10.0
March 1981:						
Dredging		[2] 14.9	11.8	10.8	9.6	11.0
All other construction		[2] 12.3	11.3	9.9	9.3	10.6
March 1982:						
Dredging			[2] 3.9	6.1	8.9	10.6
All other construction			[2] 5.2	7.3	9.1	10.6
March 1983:						
Dredging				[2] 1.0	4.6	7.5
All other construction				[2] 3.0	6.4	8.0

[1] Based on standard price indices developed by Data Resources, Inc., as part of their short- and long-term econometric forecasts for key construction components. The indices for fuels, construction materials, construction machinery and equipment, and construction labor were weighted to reflect Corps work.

[2] Actual.

FAST-TRACKING DEEP-PORT IMPROVEMENTS

Senator JOHNSTON. Mr. Secretary, I understand on your deep-draft legislation you will incorporate the fast tracking. I know I had a concept of fast tracking. That will be incorporated?

Mr. GIANELLI. That is our hope. I think, Senator Johnston, we made that recommendation to OMB and hopefully they will concur with our recommendation. We certainly believe that is necessary.

MISSISSIPPI RIVER FLOODING

Senator JOHNSTON. General Bratton, what is the status of the Mississippi River and the flood potential for the spring?

General BRATTON. Damage-wise, sir?

Senator JOHNSTON. No, the water levels, the snow in the basin, how does the Mississippi River and tributary system look for the spring in terms of flooding threats?

General BRATTON. As you probably are aware, Senator Johnston, the levels in December and January set records in many places, higher than the river stages had ever been. I would suspect that if this current situation carries over to the spring and the reservoir levels and other flows stay as high as they might, then there is a real potential that with increases from heavy rains, we would have a serious flooding condition in the lower Mississippi Valley in March or April.

Senator JOHNSTON. Are you worse off than you were in 1973 relatively speaking?

General BRATTON. No, we are not as bad off, but we are not far from it, if you compare the figures week by week and month by month.

Senator JOHNSTON. Is there any way to project the amount of snow in the Missouri River basin and how it will add to the flooding potential? Is the snowpack above normal?

General BRATTON. Well, we make these estimates every year, so the answer is "Yes." But I don't have the figure with me. I can put that information into the record and give you our current best reading and estimate based on past experience and comparing the snowfall we have up in the Missouri Basin now and upper Mississippi Basin.

Senator JOHNSTON. I wish you would give that to us.

[The information follows:]

SPRING SNOWMELT FLOOD OUTLOOK—MISSISSIPPI RIVER BASIN

Snow cover is heaviest over a wide area including central and northern Wisconsin, southern Minnesota, and northern Iowa. Snow depth over the area averages 10 to 20 inches containing 2 to 5 inches of water equivalent. Snow cover over Illinois, southern Iowa, and Missouri contains generally less than 1 inch of water equivalent.

November and December precipitation was nearly 200 percent of normal over most of the upper Mississippi basin. Heavy December rains caused unusual record floods in Illinois and Missouri. Flows are still well above normal within most of the basin. Soil moisture is high while frost depths are generally below normal. A very real flood potential exists throughout the area because of very saturated soil conditions. Instead of the usual threat from snowmelt runoff, we are facing the dilemma of high ground levels and wet conditions.

MISSOURI RIVER BASIN

Fall precipitation was above normal over the southern third of Montana, western two-thirds of North Dakota, northeastern third of Nebraska, and all of South Dakota, Iowa, and Missouri. The rest of the area received normal precipitation with the exception of the western half of Kansas which was below normal. Hence, streamflows were the highest recorded for December in parts of North Dakota, Nebraska, Iowa, and Missouri. For example, Jerome, Mo., on the Gasconade River, and Waterloo, Nebr., on the Elkhorn, recorded the highest flows of record for the month of December. Subsequent snows have fallen over the area extending from approximately Brookings, S. Dak., to Kansas City, Mo. Reported amounts range up to 15 inches at Falls City, Nebr.

OLD RIVER AUXILIARY CONTROL STRUCTURE

Senator JOHNSTON. Do you consider the Old River structure to be safe in another 1973 project flood?

General BRATTON. Yes, I do. I have looked at that very carefully several times, and we keep looking at it constantly and taking measurements daily to check the condition of the structure with respect to scour. I am confident that we have a viable structure there, one that will serve us well. I think it is important, as we are doing, to move rapidly and get the auxiliary structure built. I think our margin of safety would be very small if in 1983 we should have another 1973 flood before we have the auxiliary structure ready to go.

DIVERSION OF FLOWS INTO ATCHAFALAYA BASIN

Senator JOHNSTON. General Bratton, west of the Mississippi River in my State of Louisiana we have a great deal of flooding in that system of rivers in northeast Louisiana and central Louisiana. There are many people who have requested, and I in turn have requested, the Corps to look at the question of whether we can lessen that 30 percent statutory flow from the Mississippi into the Atchafalaya in order to unplug that basin. What is the status of that?

General BRATTON. This question arose several weeks ago and I asked General Reed, who is president of the Mississippi River Commission and also the commander of our Lower Mississippi Valley Division at Vicksburg, to have his staff make a very thorough analysis, again, of the 30/70 split of flows, between the Atchafalaya basin and the main stem of the Mississippi. I can't say at this hearing today that it wouldn't be possible to make some small adjustment in that split, but I would guess that adjustment would be very small and may not be able to be done at all.

Senator JOHNSTON. Isn't it an adjustment on an annual basis?

General BRATTON. Yes, sir.

Senator JOHNSTON. Then for a period of time during this flooding, it could be lessened, could it not?

General BRATTON. It could be, yes, sir.

Senator JOHNSTON. And General Reed will be studying both the question——

General BRATTON. He is now actively engaged in doing that.

Senator JOHNSTON. And you will let us know whether legislation is required or it can be done under existing law?

General BRATTON. It is my understanding legislation would be necessary if we were to change the 30/70 split, because everything we have done the last three decades really has been based on that split.

Senator JOHNSTON. Well, I understand the Corps, and frankly I would like to get away from having to make the constant balancing of the interest between those things, and it is very useful to have it in legislation. It seems to me this is an unusual situation this year, with so much flooding in that basin, that we could, without hurting anyone, let more go down the Mississippi and less down the Atchafalaya. So, I wish you would look at it from that standpoint.

MAINTENANCE DREDGING COSTS

With respect to the cost of dredging, I don't believe the bids by private industry in Louisiana have been unduly high. I think Bill Murden is in the back and could confirm that, but that is my understanding.

General BRATTON. It is my understanding also, sir. That is why I indicated to Senator Hatfield that the incident he cited which happened on the west coast is not a typical cost differential situation.

Senator JOHNSTON. As I understand, most of our contracts are coming in below the Corps estimate.

General BRATTON. There is more competition and industry has been more responsive in the gulf areas than they have on the west coast.

Senator JOHNSTON. I know they have built a lot of new dredges in the gulf area.

General BRATTON. I think 10 hopper dredges, and 1 they are building, to make a total of 11.

Senator JOHNSTON. I also understand with respect to private industry you monitor the amount of dredged material which they actually get, and using that new technique of having monitors to actually measure the amount of dredge material they actually get, that you have also monitored the Corps fleet on a more careful basis than was done prior to the use of so many civilian dredges. Am I correct on that?

General BRATTON. Yes, sir.

Senator JOHNSTON. And did that indicate that, perhaps, the prior estimates of the amount of work done by the Corps dredges were overliberally estimated? In other words, when you actually counted the cubic yards of material, the Corps estimates had been in prior years a little too liberal. Am I correct in that?

General BRATTON. I am not sure how to respond to that, sir. One of the reasons we did this was to confirm to ourselves or to change our methods if we couldn't confirm that we had a very accurate measurement of the cubic yards our Corps dredges were moving. May I ask Mr. Steinberg if he knows.

Perhaps what I should do, sir, is get all the data we have and provide it in the record so that we can make some conclusion here on that.

Senator JOHNSTON. That would be very good. That would be excellent.

Mr. Chairman, those are all my questions.

[The information follows:]

TOTAL ANNUAL EXPENDITURES AND YARDAGES—FISCAL YEARS 1973 THROUGH 1982

[Dollars and yards in millions]

	Fiscal year—										
	1973	1974	1975	1976	1976T	1977	1978	1979	1980	1981	1982
Corps:											
Dollars	$56	$70	$82	$84	$28	$86	$92	$93	$94	$104	$76
Percent of total dollars	44	45	52	35	42	36	30	29	25	22	17
Yards	153	190	164	125	44	128	94	90	82	88	60
Percent of total yards	49	49	49	44	49	43	34	32	28	25	22
Dollars per yard	$0.37	$0.37	$0.50	$0.67	$0.64	$0.67	$0.97	$1.03	$1.14	$1.18	$1.29
Industry:											
Dollars	$71	$86	$75	$156	$38	$151	$215	$229	$288	$365	$369
Percent of total dollars	56	55	48	65	58	64	70	71	75	78	83
Yards	159	196	168	162	45	170	186	192	207	271	212
Percent of total yards	51	51	51	56	51	57	66	68	72	75	78
Dollars per yard	$0.45	$0.44	$0.45	$0.96	$0.84	$0.88	$1.15	$1.19	$1.39	$1.35	$1.74
Total:											
Dollars	$127	$156	$157	$240	$66	$237	$307	$322	$382	$469	$445
Yards	[1] 312	[1] 386	[1] 332	287	89	298	280	282	289	[2] 359	272
Ratio of industry dollars per yard to Corps dollars per yard	1.22	1.19	0.90	1.43	1.31	1.31	1.18	1.15	1.22	1.14	1.35

[1] Reflects unusual flooding conditions on Mississippi River.

[2] Reflects yardage resulting from Mount St. Helens eruptions.

We do not find that the Corps method of reporting the annual total expenditures and yardages was previously inaccurate or in excess of the actual quantities. The table above shows that the total annual yardage removed varies from year to year due to the effects of hurricanes/storms, unusual flooding or drought conditions, and budgetary levels. During fiscal years 1973–77 (exclusive of the fiscal year 1976 transition quarter), the average annual total yardage was 323 million cubic yards. This figure is higher than usual due to flooding conditions and unusual shoaling which occurred in fiscal years 1973–75. During fiscal years 1978–82, the average annual total yardage was 299 million cubic yards. The only unusual shoaling condition that occurred during this period, was in fiscal year 1981 due to the Mount St. Helens eruption. The average annual dredging yardage in fiscal years 1978–82 was less than fiscal years 1973–77 because extended drought conditions and a less than normal frequency and severity of hurricanes and tropical storms resulted in below average runoff and, consequently, lower shoaling rates. In fiscal year 1983 we expect the total annual dredging yardage to be about 386 million cubic yards as was the case in fiscal year 1974. We forecast this figure because the flood stages on the Mississippi River are almost at the fiscal year 1973 flood stage level and additional yardage will have to be removed from the Cowlitz and Toutle Rivers during fiscal year 1983 due to shoaling resulting from the Mount St. Helens eruption. If we include this figure in the past 5 years of record, it results in an annual average yardage figure of 318 million cubic yards which is very close to the annual average yardage of 323 million cubic yards experienced during fiscal years 1973–77.

The above table shows a significant increase in the relationship of the industry unit cost per cubic yard versus the Corps unit cost per cubic yard in fiscal year 1982. During the first 3 years of the industry capability program (ICP) there were only a few instances in which Corps plant did not bid against industry dredges. During fiscal year 1982, the last year of the ICP, the majority of the hopper dredge work offered the industry was on the basis of a fair and reasonable (well-equipped contractor) cost estimate. It is too early to draw a conclusion, but the significant increase in the industry cost per cubic yard during fiscal year 1982 warrants a careful review of industry cost trends in the future.

GREGORY COUNTY PUMPED STORAGE PROJECT, SOUTH DAKOTA

Senator ABDNOR [presiding]. Thank you, Senator Johnston.

Mr. Secretary, I was pleased to note there is $2 million requested in the budget for continued planning and engineering work on the Gregory County, S. Dak., hydropower project. Could you tell the committee the amount of annual benefits the Corps expects from the project?

Mr. GIANELLI. I don't think I have that in front of me, Senator, but I would be pleased to supply it to you. You are asking for the benefits as a result of the hydropower development?

Senator ABDNOR. Yes.

Mr. GIANELLI. We will supply that for the record.

[The information follows:]

BENEFITS OF GREGORY COUNTY

The benefits exceed the costs by a ratio of 1.7 to 1. The project will decrease the future cost of power supply in the region by an estimated $216 million per year when compared to a coal-fueled unit.

CONTRIBUTION TO THE ECONOMY

Senator ABDNOR. We are under the assumption that it would contribute $200 million to the economy every year. Does that sound realistic?

Mr. GIANELLI. I think it is a project where the benefits would exceed the costs, yes.

Senator ABDNOR. What goes through my mind is that we are talking about projects that are going to put people to work and improve the economy and this is one you would have to look at. I know this is a tricky question, too, but certainly how would it rank with the projects you are looking at for a return to the economy of $200 million?

Mr. GIANELLI. I think the project would rate very high. The problem we have there, as we have in Oregon and other places, is to work out some arrangement where the power revenues can be recovered for the repayment of the specific project, not integrated into the power grid. We intend to work on that particular problem. My expectation would be that the benefits from that project would far exceed the costs and that the project would rate very high in terms of going ahead.

Senator ABDNOR. Are you going to be working on that soon?

Mr. GIANELLI. Yes, sir, we are.

Senator ABDNOR. Is it being studied now?

Mr. GIANELLI. Yes.

Senator ABDNOR. It would require legislation, I assume?

Mr. GIANELLI. We are working on it with the State and we will be continuing to give that much attention.

MISSOURI NATIONAL RECREATION RIVER, S. DAK. AND NEBR.

Senator ABDNOR. Speaking of my State, South Dakota met all the criteria set out by the Corps for matching funds under the code 710 program for the development of the Missouri River recreation plan. The State is interested to know when a decision will be made on the proposal? Can you tell us the status of the funding?

Mr. GIANELLI. Let me comment, if I could. We have been working with Governor Janklow very closely with respect to that proposal concerning the development of additional recreation facilities at existing Corps projects. We have asked the Corps to evaluate the savings to the Federal Government by having the State take over some of the O&M facilities which would, in turn, perhaps justify additional Federal expenditure. The current status of that study, as I recall, is that the Corps is making that evaluation and, hopefully, will have it rather soon and we will be able to communicate the results to Governor Janklow.

Senator ABDNOR. He is eager to hear your report on that.

Mr. GIANELLI. I know exactly what you are talking about, Senator.

ADDITIONAL QUESTIONS SUBMITTED BY SENATOR ABDNOR

Senator ABDNOR. I have several other questions that I am going to submit for the record, some of them on behalf of Governor Janklow and some questions that I was asked to submit to you on behalf of the Senators from Iowa. Rather than take the time now, I will just submit the questions and ask you to respond for the record.

Chairman HATFIELD [presiding]. Thank you, Senator.

Mr. GIANELLI. We will be pleased to respond.

QUESTIONS SUBMITTED BY SENATOR ABDNOR

GREGORY COUNTY PUMPED STORAGE PROJECT, SOUTH DAKOTA

Question. First, I am pleased to note the $2 million requested in the budget for continued planning and engineering work on the Gregory County hydroelectric power project. For the record, could you tell the committee the amount of net annual benefits the Corps expects from this project?

Answer. The Gregory County hydroelectric pumped storage facility is estimated to have net annual benefits of $216 million based on October 1982 price levels and $7\frac{7}{8}$ percent discount rate.

Question. Are there other potential civil works projects elsewhere in the Nation which will both pay for themselves, as Gregory will, and generate net benefits in excess of $200 million annually, and if so, would you list them, please, for the record?

Potential civil works projects generating over $200 million in annual benefits

1. Strube Lake and Cougar additional units, Oregon and Washington.
2. Bonneville power units, Oregon and Washington.
3. Bradley Lake, Alaska.
4. Snettisham, Alaska.
5. Cowanesque Lake, Pa.

MISSOURI NATIONAL RECREATIONAL RIVER

Question. South Dakota has met all the criteria set out by the Corps for matching funds under the code 710 program for development of the Missouri River recreation plan, and the State is interested to know when a decision will be made on its proposal. What is the status of funding for this program for South Dakota and for the Nation?

Answer. The cost-sharing contract is currently in my office for review. Pending approval of the contract, funds were not included in the fiscal year 1984 budget for the work in South Dakota.

Question. Is additional funding being considered for this program in the context of the administration's efforts to accelerate construction of various Federal projects in order to spur employment?

Answer. Yes sir. Assuming approval of the contract, this program would be an appropriate one to create jobs quickly since the State has already started spending its half of the funds needed.

PROGRAM BALANCE IN UPPER MISSOURI RIVER BASIN

Question. The Corps' budget for new construction has been declining fairly rapidly in recent years, while your budget for operation and maintenance has been increasing. I hope to discuss the national implications further with you tomorrow before the Committee on Environment and Public Works, but for now, in the context of my more parochial interets, do you feel that you are achieving a proper balance of construction versus O&M spending in the upper Missouri River basin?

Answer. The major authorized Corps of Engineers projects in the upper basin have been constructed. The current study on the Missouri River, S. Dak., Nebr., N. Dak., and Montana addresses remaining opportunities for additional hydropower facilities at the existing main stem dams and other related problems. The proposed project for Gregory County hydroelectric pumped storage facility, South Dakota, which is budgeted for continuation of planning and engineering in fiscal year 1984, would help provide a better balance between construction and O&M when it is authorized and funded for construction. The upper Missouri River basin, like much of the rest of the Nation, has not had new authorizations and new starts for many years. This is the reason I have proposed new starts under innovative financing proposals during this time of severe budget constraints.

Question. Are there construction projects which could be accelerated in the Division if Congress decides to pass a jobs bill?

Answer. The Missouri National Recreational River project is the only authorized project in the Missouri River Division that is available for a construction start.

SPRINGFIELD, S. DAK., WATER INTAKE

Question. The Corps has been authorized to relocate the water intake structure serving the community of Springfield, S. Dak., but no funds have been requested to do so. I am aware of the Corps' argument that the city should have known better than to place its intake where it did, but the fact remains that the Corps approved the permits for the location, and it is the Corps' operations of Gavins Point Dam which has caused the structure to be threatened by silt. I am aware of no imminent threat to the structure at this time, but it sems inevitable that it will again silt up, leaving the city without water, as has already occurred once. I'm sure that you can recognize that, having been directed by Congress to provide a solution, the Corps is not going to look very good in the eyes of the public if and when the structure fails again and the Corps has not lifted a finger to carry out its congressional mandate.

Answer. This project is not familiar to me, Senator. I have not personally reviewed it. We certainly will take a look at it in connection with the fiscal year 1985 budget. I would hope that this matter could be resolved and the potential for a structure failure avoided.

QUESTIONS SUBMITTED BY SENATOR ABDNOR ON BEHALF OF GOVERNOR JANKLOW

ALLOCATION OF MISSOURI RIVER WATER

Question. Several downstream Missouri River States have sued the Federal Government to prevent South Dakota from allocating 50,000 acre-feet of Missouri River water for the proposed ETSI coal slurry pipeline. To what extent are you familiar with this dispute?

Answer. Last August the States of Nebraska, Missouri, and Iowa, plus some other private interests, brought suit against the Corps, Department of the Army, Department of the Interior, the Missouri River Division Engineer, and the Omaha District Engineer for our role in the water contract and permit process for the ETSI situation. Since last August, I am aware of some legal posturing and case preparation, but to my knowledge, no hearing date has been set.

Question. Do you believe allocation of Missouri River water should be a Federal decision?

Answer. Allocation of Missouri River water most properly should be a regional function with technical advice from the Federal agencies involved.

Question. Do you believe it is appropriate to continue with water project development in the downstream States while those same States are alleging that there is insufficient water available to allow water project development in South Dakota?

Answer. All water resources projects, which propose net economic benefits, should be considered for development. If a project produces positive economic outputs and is generally supported by the affected interests, it should continue to receive favorable consideration. Some compromises may be necessary between interests within the basin to gain the public support.

SOUTH DAKOTA'S FEDERAL DEBT CLAIM

Question. South Dakota has lost over 500,000 acres as part of the Pick-Sloan program in order to provide downstream Missouri River States with flood control and navigation benefits. The Department of the Interior has recognized the long outstanding Federal debt to the State to compensate for the lost acreage, and has included this debt as a factor in Federal water project development and cost sharing for South Dakota water projects. Philosophically, what is your response to South Dakota's Federal debt claim? Practically, how would you include such a factor in the development of a South Dakota water project such as the Gregory County pumped storage hydro facility?

Answer. I agree all aspects of the Pick-Sloan plan have not been completed; however, the main stem Missouri River dam and lake projects are complete and the lands required for these projects were acquired based on just compensation to the non-Federal landowners. South Dakota's views are carefully considered in all project proposals. Because the additional land requirements were minimal and because South Dakota favorably regards the Gregory County project, the Federal debt claim was not of major consequence in the formulation of the project.

CHARGES FOR NAVIGATION, FLOOD CONTROL, AND WATER SUPPLY

Question. The Corps of Engineers, Omaha District, has proposed charging South Dakota for the 4,300 acre-feet of water for municipal purposes that will be transported by the ETSI coal slurry pipeline. The Corps of Engineers has cited the 1944 Flood Control Act, the 1958 Water Supply Act, and the 1952 Independent Offices

Appropriation Act as the basis for such charges. South Dakota has indicated a willingness to accept such charges only if the Corps of Engineers applies the same policy and charges to downstream Missouri River States for navigation, flood control, and water supply benefits. Has the Corps of Engineers considered application of such charges to those downstream States? Based on your records, what would such charges total? Please include a breakdown by quantity and cost of each of the separate uses (navigation, flood control, and municipal/industrial use).

Answer. No sir. Navigation and flood control are not currently reimbursable under Federal law and no releases are being made exclusively for downstream water supply. Based on the 1958 cost allocation for the overall Missouri River main stem reservoir system, overall investments costs were allocated to four major purposes with about $205.7 million for flood control, $108.6 million for irrigation, $134.8 million for navigation, and $740.2 million for power. Specific investment costs for recreation of $19.6 million were also included in the 1958 allocation. Only irrigation and power are currently reimbursable. The estimated total power revenue produced by our projects to date is $1.2 billion. Other than for exclusive flood control storage, water in the main stem system is not allocated to specific purposes. Gross storage in the system of 74,373,000 acre-feet includes 4,685,000 acre-feet for exclusive flood control, 11,851,000 for flood control and multiple use, 39,512,000 acre-feet for carryover multiple use, and 18,325,000 acre-feet in inactive storage.

Comprehensive River Basin Plans

Question. Legislation was introduced during the 97th Congress, at the request of the administration, to authorize the necessary funds for the completion of certain comprehensive river basin plans for flood control, navigation, and other purposes. What is the current status of each of the basin accounts including the existing statutory limitation on each account, and the cost of each specific project in each of the accounts?

Answer. I will be glad to furnish the estimated Federal cost, total requirement through fiscal year 1983 and the monetary authorization for the 29 basins which are covered by basin monetary authorization for the record.

[The information follows:]

COMPREHENSIVE RIVER BASIN PLANS FOR FLOOD CONTROL, NAVIGATION, AND FOR OTHER PURPOSES

(In Thousands of Dollars)

Basin	Estimated Federal Cost	Total Requirement Thru FY 1983	Monetary Authorization
Alabama-Coosa River Basin	1,607,413	310,777	286,000
Arkansas River Basin	1,540,248	1,458,633	1,422,667
Arkansas-Red River Basin	874,800	69,931	46,400
Baltimore Harbor	334,000	2,750	40,000
Blue River Basin	311,600	13,244	40,000
Brazos River Basin	962,700	266,048	200,500
Central and Southern Florida	1,460,000	271,256	244,300
Columbia River Basin (Columbia River Local Protection)*	2,800,037 (48,720)	2,127,309 (19,244)	2,013,300 (15,000)
Connecticut River Basin	83,188	83,188	96,957
Cottonwood Creek	750,000	11,875	40,000
Gulf Intracoastal Waterway, Saint Marks, Tampa	339,000	0	40,000
Illinois Waterway Duplicate Locks	2,265	2,265	40,000
Mississippi River and Tributaries	13,847,842	3,482,025	2,559,922
Missouri River Basin	2,843,172	2,122,519	1,926,094

* Specific monetary authorization within an overall monetary authorization.

COMPREHENSIVE RIVER BASIN PLANS FOR FLOOD CONTROL, NAVIGATION, AND FOR OTHER PURPOSES

(In Thousands of Dollars) (cont'd.)

Basin	Estimated Federal Cost	Total Requirement Thru FY 1983	Monetary Authorization
North Branch Susquehanna River Basin	301,810	294,670	237,000
Ohio River Basin	1,589,558	1,461,163	1,379,833
Ouachita River Basin	119,585	75,759	73,300
Red Run Drain and Lower Clinton River	125,000	3,863	40,000
Red River Waterway	2,199,317	499,007	119,000
Sabine River Basin	303,907	2,935	40,000
Sacramento River Basin	138,555	73,385	72,740
San Joaquin River Basin	407,835	357,524	305,500
Santa Ana River Basin	60,545	47,201	47,500
South Platte River Basin	183,253	150,222	138,300
Tampa Harbor	222,000	147,470	40,000
Trinity River Basin	1,773,596	213,979	83,000
Upper Mississippi River Basin	174,185	151,831	137,500
Wabash River Basin	269,522	4,677	50,000
White River Basin	460,326	336,224	305,000
TOTALS 29 Basins	36,085,959	14,041,730	12,064,813

LOCK AND DAM 26—DUPLICATE LOCK

Question. Several Mississipi River States are interested in securing a second lock at lock and dam 26. Could you please indicate the current navigational carrying capacity of the Mississippi River, the increase that will result in current construction of the new lock at lock and dam 26, and your assessment of the future need as well as timing for the second lock at lock and dam 26?

Answer. Approximately 70 million tons of commodities, valued at over $14 billion, were locked through the existing lock and dam 26 project in 1981. The average delay for locking the tows was approximately 10 hours. The Corps' studies, for the new single 1,200-foot lock, indicate that the maximum capacity to move traffic economically is about 86 million tons annually, and will be reached by 1989, about 2 years after the 1,200-foot lock is scheduled to be open to navigation. Earlier Corps of Engineers' studies, made in connection with the current 1,200-foot lock project, indicate that addition of a 110- by 600-foot second lock would increase economic capacity by 65 percent, to about 142 million tons annually. These conclusions must be qualified because they do not consider the impact of cost recovery on the growth of traffic.

The Upper Mississippi River Basin Commission submitted its master plan to Congress on January 1, 1982, and recommended construction authorization of the second lock. If Congress is to authorize and appropriate funds for a second lock at lock and dam 26, the potential exists for substantial savings, taking advantage of construction sequencing associated with ongoing work for replacement of the existing lock. However, timely authorization and appropriation of funds would be essential to achieve savings. In fact, the design memorandum would need to be initiated by January 1984 in order to optimize savings.

STATUS OF WATER RESOURCE DEVELOPMENT IN MISSOURI RIVER BASIN STATES

Question. In order to assess the needs of the Missouri basin States, please provide a status report on all Corps of Engineers projects for each of the lower basin States, including: Project development status, construction schedule, physical location, and congressional districts, funding needs for the next 3 fiscal years, the status of all feasibility reports, planning reports, environmental assessments, lawsuits for each specific project, the administration's position on each project, and the status of any Federal water contracts, easements, and O&M agreements. Perhaps your response to this question would be better transmitted to my office than for the committee hearing record.

Answer. As suggested, a status report will be provided directly to the Governor's office.

COST SHARING AND INNOVATIVE FINANCING

Question. How will the Corps of Engineers proceed with water project cost-sharing requirements in lieu of any formal administration cost-sharing policy?

Answer. Pending a comprehensive administration cost-sharing policy, individual agencies have been proceeding to put together their own packages of new project financing based on increased non-Federal participation in project financing. The Army's initiatives in this area are reflected in the new starts contained in the President's fiscal year 1983 budget, as amended, and in his fiscal year 1984 budget. Because we believe that it is essential to continue to start new water projects, we will stay on the course that we have chartered until administrationwide cost-sharing and financing policy is decided upon.

CORPS ROLE IN PROJECT DEVELOPMENT

Question. In view of the Corps' past statements that hydro project development will be a 100-percent non-Federal responsibility under the new cost-sharing policy, is the Corps willing to abdicate its traditional role as project developer, construction agent, and project owner if the non-Federal developer wishes to assume such responsibility? In other words, what new relationship will have to be developed between the Federal Government and the State in terms of making and implementing project development decisions?

Answer. I think that, in the case of hydropower development with non-Federal responsibility for full financing of a project, a wide variety of arrangements with regard to project ownership, marketing, and planning are possible. No doubt in many cases, such as the Bradley Lake project in Alaska, non-Federal interests will decide to proceed on their own without any Federal role whatsoever. In other cases I would expect non-Federal interests to continue to draw upon the expertise of the Corps of Engineers in the area of project planning, design, and construction oversight in implementing new project development. There is some question in my mind as to whether the Corps of Engineers should engage in a single-purpose hydroelectric project where non-Federal interets are more appropriate.

IMPLEMENTATION OF FISCAL YEAR 1983 CONTINUING RESOLUTION

Question. There has been some confusion regarding interpretation of the Fiscal Year 1983 Continuing Resolution and the Senate and House Energy and Water appropriation bills. In particular, some Federal agencies have apparently stated that a project must be referenced in both the Senate and House reports before any funds can be released for that project. This would preclude the Corps of Engineers, for example, from releasing the $1 million approved by the Senate for the Gregory County pumped storage hydroelectric facility. How have you interpreted and implemented the provisions of the Fiscal Year 1983 Continuing Resolution?

Answer. In accordance with the provisions of the conference report on the continuing resolution, the fiscal year 1983 work allowances are based on an analysis of the fiscal year 1983 budget, and House Report 97-850 and Senate Report 97-673, which accompanied the Energy and Water Development appropriations bill, 1983, reported to both houses. In general, any continuing study or project for which funds were budgeted and subsequently allowed by either Appropriations Committee received a work allowance. Generally, any new or continuing study for which funds were added by both committees received a work allowance. Other continuing activities and projects which have a need for funds in fiscal year 1983 are being considered on a case-by-case basis.

In the specific case of the Gregory County hydroelectric pumped storage study in South Dakota, no funds were allotted in fiscal year 1983 because the study is a CP&E new start and funds were added by only one committee. However, $2 million is included for this study for CP&E in the President's fiscal year 1984 budget.

EASTERN AND WESTERN SOUTH DAKOTA WATER SUPPLY STUDIES

Question. What is the Corps' position on the ongoing eastern and western South Dakota water supply studies? The South Dakota Department of Water and Natural Resources has advised me that these two studies are among the best regional planning efforts ever conducted in the State. They further advise me that it is essential that the funding be increased for the western Dakotas study to the $40,000-$500,000 level in fiscal years 1984 and 1985 in order to complete the study during fiscal year 1986 as planned. What is the Corps' future budget projection for these two studies?

Answer. The Corps position is that the current budget requests of $220,000 and $150,000 for the eastern and western South Dakota water supply studies are sufficient for us to meet the currently projected completion dates of March and September 1986, respectively.

QUESTIONS SUBMITTED BY SENATOR ABDNOR ON BEHALF OF SENATOR GRASSLEY AND SENATOR JEPSEN

CLAIM OF WESTERN CONTRACTING CORP. AGAINST THE CORPS

Question. Finally, Mr. Secretary and General Bratton, I have several questions which I am submitting on behalf of Senator Grassley and Senator Jepsen concerning the claim of Western Contracting Corp. of Sioux City, Iowa, against the Corps. The Corps improperly terminated Western's contract for construction of R. D. Bailey Dam in West Virginia in March 1977. Ever since that time, Western has been seeking just compensation, but the Corps continues to refuse to make even partial payment on the claim. The Corps has been found to be grossly in error by its own Board of Contract Appeals and for the record I would like it noted that this matter should be settled without further improprieties by the Corps. In my view, that should include the provision of a partial payment without further delay, pending negotiation of the final settlement. There is just no excuse for a Federal agency, having acted improperly in the first place, to prolong the hardship for a private company; and I consider this matter to be a very black mark on the Corps activities.

Answer. Each of the questions will be answered in turn.

Question. Why was the audit begun at the late date of June 7, 1982, inasmuch as the Corps knew since December 1981 that the default determination had been overturned?

Answer. The contractor's settlement proposal was received on April 27, 1982. The settlement proposal was promptly reviewed and when necessary supplemental information was received, the audit was initiated. Our chief auditor traveled to the contractor's home office in May 1982 to be available to answer contractor's questions and to remove any preliminary questions that the contractor might have had. The actual audit could not begin until the contractor's proposal was received and supplemented.

Question. Why wasn't the audit completed until December 30, 1982?

Answer. The total ORDDC-AH resident audit staff worked approximately full time until the audit was complete. The audit required numerous trips to the contractor's office and there was an enormous volume of records that had to be audited.

Question. Does the Corps harbor any ill will against Western or resent the strong criticism of the Corps action by the board in its decision?

Answer. No.

Question. Is it the Corps position that Western is not entitled to any additional payments under the contract in connection with the termination settlement?

Answer. It is the Corps position that until all the outstanding issues are resolved, the amount due the contractor cannot be determined. Based on Government estimates, the total amount due the contractor is minimal. The contractor has several major claims that were submitted in 1976 and to date he has not furnished a detailed explanation of these claims, as requested on several occasions.

Question. What is the basis of the Corps position that the contract would have been completed by Western at a loss?

Answer. The contractor's costs at date of termination, plus the Government's estimated cost of completing the work remaining in the contract at the date of termination, exceeds the Government's estimated approved contract amount after all changes and claims are resolved.

Question. Where in the regulations is a position on the part of the Corps delineated?

Answer. The Corps is proceeding under GP-37 of the contract, DAR 8-213.1(b) and DAR 8-304, and is trying to determine what the contractor is due under that contract. This requires the cooperation of both parties.

Question. Has the Corps prepared cost to complete and revenue to complete estimates?

Answer. Yes.

Question. Has the Corps reviewed estimates submitted by Western? If the answer is yes, what rate of loss has been estimated? What is the basis of the estimate? Has the Corps supplied any of these estimates to Western?

Answer. Yes. Rate of loss is not based on Western's estimates. Government's estimate of Western's loss position is based on Government's estimates that cannot be revealed in accordance with regulations.

Question. What additional revenue does the Corps contend Western is entitled for the claims asserted by it? The Corps letter of September 17, 1981, states that the claims are worth $3,138,413.46 without any amounts included therein for the changed condition claim on the cutoff wall, nor was any amount included for the spillway changed condition claim. The Corps' audit discloses that Western incurred $35,194,435 in costs in performing the contract for which Western has been paid only $29,368,041. Thus, there is the amount of $5,826,315 due, plus any adjustment for profit.

Answer. This contract was a fixed-price contract for which a contractor is paid his original bid amount plus an equitable adjustment for any changes to the contract. This type of contract does not provide for recovery of actual cost or a guaranteed profit. The details of this question cannot be answered without revealing the Government estimates which is improper as negotiations are continuing.

Question. In addition, the audit discloses an additional $703,303 incurred by Western as reimbursible settlement expenses.

Answer. Settlement expenses are tentative, separate, and not subject to partial payment.

Question. Is the Corps position that this entire figure of $6,539,618 will be negated by a loss adjustment? If the answer is in the negative, why has not a partial payment been made?

Answer. The Corps position is that we cannot at this time determine the contractor's entitlement.

Question. Has any consideration been given to financial hardship to Western due to the wrongful termination with respect to processing of a partial payment?

Answer. The Corps is anxious to reach a termination settlement at an early date regardless of whether or not Western is having financial difficulty.

Question. Why has the Corps failed to add to the $34,097,746 revised contract amount the sum of $3,138,419 which it has previously acknowledged is due to Western and why wasn't anything added to the revised contract amount for the cutoff wall changed condition claim and the changed condition claim in the spillway?

Answer. The approved contract amount cannot be revised without contract modifications. The approved contract amount will be revised as outstanding claims and changes are resolved. This has no effect as to the issue of a loss possibly to be incurred by the contractor for that work remaining after termination.

Question. General provision 37(j) and DAR 8-213.1 regarding partial payment require that the partial payment application be processed promptly. Why have they not been followed by the Corps?

Answer. GP 37 does not state that partial payment on a request for partial payment will be made automatically. The original contract amount was $24,411,955 and the contractor has been paid $29,368,041.69 on a revised contract amount of $34,097,746.51, and the Government's position is the contractor would have incurred a loss if he had completed the contract. To determine if the contractor was in a profit or loss situation requires the negotiation of many unresolved changes and claims. If it turns out that the contractor would have been in a loss situation had the contract been completed, the contract requires that an adjustment be made at the amount due the contractor for a termination for a convenience settlement. In other words, termination costs for getting off job. Therefore, the Government cannot make a partial payment at this time as there is no agreed basis upon which this action can be justified because of the unresolved disputed position of the parties.

Question. Where in these provisions is it required that it be determined whether a loss has been sustained or not before a partial payment be made?

Answer. This is part of specialized review required in DAR 8-213.1(b) and DAR 8-304.

Question. Since these provisions require the contractor to repay any payments not actually due, together with interest, how can the Corps justify refusal to make partial payment?

Answer. The regulations state that the total amount of all partial payments shall not exceed the amount which will, in the opinion of the TCO, become due to the contractor by reason of the termination.

QUESTIONS SUBMITTED BY SENATORS GORTON AND JACKSON

Chairman HATFIELD. I also have a series of questions submitted by Senators Gorton and Jackson which I will include in the record for your response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATORS GORTON AND JACKSON

PROJECT CAPABILITIES

Question. Please provide a list of all authorized Corps projects in Washington State. Additionally, for each of those projects provide the following information:

The amount of funds requested in the President's fiscal year 1984 budget and the purpose for which those funds are requested—for example, construction—and the dollar amount of any additional fiscal year 1984 capability above the President's budget request and a brief description of the work which would be accomplished if those additional amounts were provided.

Answer. The requested information on active authorized Washington State projects will be provided for the record. However, to be meaningful, a capability not only should be reflective of the preconstruction planning and engineering required prior to the construction of a project, but also the competition for available funds and manpower. This is the basis for the amounts proposed in the President's budget for Army's fiscal year 1984 civil works program and is consistent with the administration's assessment of national priorities for Federal investments and the objective of avoiding larger budget deficits and more serious adverse effects that Government borrowing can have on the national economy. Nevertheless, the capabilities you have requested are being provided even though each cited capability amount is for a project or study, considering that project or study by itself without reference to the rest of the program. It also should be pointed out that while additional funds for some individual studies or projects could be utilized, as indicated in the list, offsetting reductions would be required in order to maintain the President's budgetary objectives.

[The information follows:]

AUTHORIZED CORPS OF ENGINEERS PROJECTS IN WASHINGTON STATE

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
CONSTRUCTION PROJECTS				
Bonneville 2nd PH, OR & WA	$18,500,000	Continue construction including miscellaneous powerhouse items, site restoration, various fish facilities and miscellaneous other project features	$ 0	No additional requirement
Bonneville Power Units, OR & WA	0 1/		0 1/	
Chief Joseph Add'l Units, WA	16,700,000	Continue construction including uprating of Units 1-16, Bridgeport State Park Phase II and miscellaneous other project features	2,200,000	Advance completion of Security guardhouse and Units 17-27 completion by 2 years
John Day Lock & Dam-Lake Umatilla, OR & WA	4,500,000	Continue construction of Fingerling Bypass System including the outfall structure & collection channel	9,300,000	Advance completion of project by 31 months
Lake Washington Ship Canal, WA (Major Rehab)	3,720,000	Complete major rehabilitation construction including the emergency closure system and storage, downstream guard gate rehabilitation and downstream stoplog slots	0	No additional requirement

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
CONSTRUCTION PROJECTS (Cont'd)				
Lwr Snake River Fish & Wildlife Compensation Plan, OR & WA	$18,700,000	Continue fish hatchery construction at 5 various hatcheries including Lyons Ferry Hatchery, WA and miscellaneous wildlife facilities	$ 4,300,000	Advance Lyons Ferry satellite facilities Phase II by 6 months and Crystal Springs Hatchery by 3 months
Mill Creek Lake, WA (Major Rehab)	1,500,000	Continue major rehabilitation construction including channel rehabilitation, trash shear boom and additional slope protection	0	No additional requirement
O&M PROJECTS				
Anacortes, WA	0	No requirement 2/	0	No requirement 2/
Bellingham Harbor, WA	0	No requirement 2/	0	No requirement 2/
Blaine Harbor, WA	0	No requirement 2/	0	No requirement 2/
Bonneville Lock and Dam, (Lake Bonneville) OR & WA	10,365,000	O&M of project and related facilities including major powerhouse modernization and rehabilitation of traveling fish screens	2,617,000	Repair powerhouse and equipment
Chief Joseph Dam, (Rufus Woods Lake), WA	4,975,000	O&M of project and related facilities	0	No additional requirement
Columbia & Lower Willamette Rivers below Vancouver, WA & Portland OR	11,858,000	Maintenance channel dredging and pile dike repair	9,320,000	Dredge Columbia River miles 64-69 due to Mt. St. Helens activity and dredge Willamette River miles 1-5

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
O&M PROJECTS (Cont'd)				
Columbia River @ Baker Bay, WA	$ 127,000	Maintenance channel dredging	$ 136,000	Dredge channel to Baker Bay
Columbia River @ the Mouth, OR & WA	6,547,000	Maintenance dredging of Columbia River entrance	0	No additional requirement
Columbia River between Chinook, WA, and head of Sand Island, WA	249,000	Maintenance channel dredging	0	No additional requirement
Columbia River between Vancouver, WA and The Dalles, OR	701,000	Maintenance channel dredging and pile dike repair	0	No additional requirement
Cowlitz River, WA	0	No requirement - Maintenance of the navigation channel has been deferred	0	No requirement 3/
Ediz Hook, WA	0	No requirement. Rock revetment and nourishment adequate	0	No requirement 4/
Everett Harbor & Snohomish River, WA	850,000	Maintenance channel dredging	260,000	Dredge channel in Snohomish River
Grays Harbor & Chehalis River, WA	3,755,000	Maintenance estuary and harbor dredging	0	No additional requirement
Howard A. Hanson Dam, WA	407,000	O&M of project and related facilities	0	No additional requirement
Ice Harbor Lock & Dam, WA	4,021,000	O&M of project and related facilities	250,000	Repair powerhouse

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
O&M PROJECTS (Cont'd)				
John Day Lock & Dam (Lk Umatilla), OR & WA	$ 9,999,000	O&M of project and related facilities including major powerhouse modernization	$2,825,000	Repair powerhouse and equipment
Kingston Harbor, WA	0	No requirement 2/	0	No requirement 2/
Lake Crockett, WA	0	No requirement 2/	0	No requirement 2/
Lake River, WA	0	No requirement 3/	0	No requirement 3/
Lake Washington Ship Canal, WA	2,478,000	O&M of project and related facilities	0	No additional requirement
Lewis River, WA	0	No requirement 3/	0	No requirement 3/
Little Goose Lock & Dam (Lake Bryan), WA	4,027,000	O&M of project and related facilities including mobile crane and voltage regulators	100,000	Repair powerhouse
Lower Granite Lock & Dam, WA	5,078,000	O&M of project and related facilities including mobile crane and spare navigation lock floating bulkhead	100,000	Repair powerhouse
Lower Monumental Lock & Dam (Lake Herbert G. West), WA	3,233,000	O&M of project and related facilities including mobile crane	100,000	Repair powerhouse
Mats Mats Bay, WA	0	No requirement 2/	0	No requirement 2/

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
O&M PROJECTS (Cont'd)				
McNary Lock & Dam (Lake Wallula), OR & WA	$11,240,000	O&M of project and related facilities including major powerhouse and spillway gate seal heaters	$ 785,000	Repair joints at navigation lock and repair spalled concrete at navigation lock
Mill Creek Lake, WA	365,000	O&M of project and related facilities	0	No additional requirement
Mud Mountain Dam, WA	800,000	O&M of project and related facilities including repairs to the debris floating plant and other miscellaneous repairs	0	No additional requirement
Neah Bay, WA	0	No requirement 4/	0	No requirement 4/
Olympia Harbor, WA	0	No requirement 2/	0	No requirement 2/
Port Angeles Harbor, WA	0	No requirement 2/	0	No requirement 2/
Port Gamble Harbor, WA	0	No requirement 2/	0	No requirement 2/
Port Townsend Boat Basin & Waterway connecting Port Townsend and Oak Bay, WA	240,000	Periodic maintenance basin dredging	0	No additional requirement
Puget Sound & Its Tributary Waters, WA	658,000	Maintenance debis removal from Puget Sound area	0	No additional requirement

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
O&M PROJECTS (Cont'd)				
Quillayute River, WA	$ 380,000	Maintenance channel dredging	$ 480,000	Dredge boat basin
Seattle Harbor, WA	715,000	Maintenance channel dredging	0	No additional requirement
Shilshole Bay, WA	0	No requirement 2/	0	No requirement 2/
Skamokawa Creek, WA	0	No requirement 3/	0	No requirement 3/
Stillaguamish River, WA	100,000	Project inspection and maintenance levee repair	0	No additional requirement
Swinomish Channel, WA	330,000	Maintenance channel dredging	0	No additional requirement
Tacoma Harbor, WA	0	No requirement 2/	0	No requirement 2/
Tacoma, Puyallup River, WA	60,000	Maintenance levee repair	0	No additional requirement
The Dalles Lock & Dam (Lake Celilo), WA & OR	8,110,000	O&M of project and related facilities including upgrade of the powerhouse control system	0	No additional requirement

Project	President's FY 1984 Budget Request		Additional FY 1984 Capability Above the President's Budget Request	
	Amount	Purpose	Amount	Purpose
O&M PROJECTS (Cont'd)				
Upper Columbia River Hydrographic Surveys (Richland, WA, to Grand Couiee Dam)	$ 0	No requirement 3/	$ 0	No requirement 3/
Willapa River & Harbor & Naselle River, WA	186,000	Project surveillance including surveys and inspections	370,000	Dredge Willapa channel
Wynoochee Lake, WA	732,000	O&M of project and related facilities	200,000	Repair fish collection facility

1/ Construction start in FY 1983 and continuation of construction in FY 1984 dependent upon 100% upfront financing by local interests.

2/ Harbor depths adequate for current use.

3/ Channel depth adequate for current use.

4/ Harbor protection structures adequate for current use.

SMALL PROJECTS IN WASHINGTON STATE

Question. Please provide a list of all small projects in Washington State. Also provide your fiscal year 1984 capability for each small project and a brief description of the work which would be accomplished if those additional amounts were provided.

Answer. The requested information for all small projects in the State of Washington follows. The listed fiscal year 1984 capabilities are subject to the previously stated qualifications.

Project	Capability	Description
Sec. 14—Emergency streambank and shoreline protection:		
Salmon Creek near Vancouver, Wash		Funded for construction in fiscal year 1983.
Tilton River, Morton, Wash	$81,000	Start and complete construction.
Hoh River, Wash	242,000	Start and complete construction.
Sec. 107—Navigation:		
East Bay SBB, Olympia, Wash		Funded for completion in fiscal year 1983.
Friday Harbor SBB, Wash		Capability depends upon determination of final cost sharing.

FRIDAY HARBOR, WASH.

Question. The Friday Harbor small boat project is being considered under the continuing authority program. What is the status of the project and its fiscal year 1984 capability?

Answer. Plans and specifications have been prepared and the project is awaiting construction funding. The House report on the fiscal year 1983 Energy and Water Development appropriations bill provided funds to construct the Friday Harbor breakwater. However, the Senate report on the 1983 bill did not provide funds for the project. Also, the continuing resolution did not make any provision for this project. Therefore, since the project would be a new construction start we do not feel we should proceed to construction without further congressional direction. Consequently, a capability has not been expressed for this project.

GRAYS HARBOR, WASH.

Question. The Grays Harbor navigation project was approved by the Board of Engineers for Rivers and Harbors on December 14, 1982. Describe your findings to date on the project.

Answer. Modification of the existing Federal navigation project at Grays Harbor is engineeringly feasible, economically justified, and environmentally acceptable. Improvements considered include deeper and wider channels, replacing the Union Pacific Railroad bridge, construction of a new turning basin, modifying an existing turning basin, and deauthorizing two existing turning basins. The project would provide safe navigation and would allow for more efficient movement of waterborne commerce by vessels with greater cargo capacity than currently use the harbor.

Question. What is your fiscal years 1983 and 1984 capability for planning and engineering on the project?

Answer. At the time the budget was formulated, this project was not available for consideration as a CP&E new start. Based upon indications from local sponsors, the CP&E new starts in the fiscal year 1984 budget appear to have a reasonable chance of implementation pursuant to cost-sharing formulas being discussed. Pending cost-sharing discussions with, and expressions of interest by, the Grays Harbor port interests, we have not established a capability for either fiscal year 1983 or fiscal year 1984.

MOUNT ST. HELENS, WASH.

Question. Please outline emergency work that has been performed on the Toutle and Cowlitz Rivers during fiscal years 1982 and 1983.

Answer. Levees near Longview, Kelso, Lexington, and Castle Rock along the Cowlitz River were raised an average of 5 feet in order to restore the 100-year level of flood protection to those communities. All work on emergency levee raises was completed by January 14, 1983, at an estimated cost of approximately $3.1 million. In addition, excavation of a sediment basin at river mile 2.0 on the Toutle River was initiated in early January 1983. The contract calls for removal of approximately 3 million cubic yards of sediment before mid-April at a cost of $3.2 million. A program of monitoring the Cowlitz and Toutle River systems for sediment movement and deposition is underway. The program will enable the Corps of Engineers to anticipate potential emergency situations and respond to them in a timely manner. The fiscal year 1983 monitoring program will cost approximately $1 million.

Question. What additional steps are being contemplated in the near future to insure adequate flood protection of communities in the Cowlitz River basin?

Answer. We are currently evaluating the impact of this last winter's sediment infill in the Cowlitz River. A report on the status of the sediment deposition in the Cowlitz River and the current level of flood protection will be submitted to my office by April 30, 1983. In addition, an advance measures report will be submitted at approximately the same time outlining measures that could be undertaken to maintain or restore flood protection levels to communities on the lower Cowlitz River.

Question. It is apparent that without a dredging program in the Toutle and Cowlitz Rivers the level of flood protection to the area will drop as more material is deposited. What is the current level of flood protection in the Cowlitz River area?

Answer. At the present time, Longview/Kelso and Lexington have 100-year flood protection, while at Castle Rock, the current level of flood protection is about 60 years.

Question. What will be the flood protection level by the end of fiscal year 1983?

Answer. At the end of fiscal year 1983, without further work on the levees or dredging in the river, the level of protection at Lexington and Longview/Kelso will be about 50 years. At Castle Rock, the level of protection would be 40 years.

Question. What would be your fiscal year 1984 capability to provide 100-year flood protection to the people in the Cowlitz River area?

Answer. Funding for flood protection along the Cowlitz and Toutle Rivers has been provided under authority of Public Law 84–99. Under that emergency authority, we provide assistance in the event of life-threatening flood or disaster. We would not automatically provide 100-year flood protection and, therefore, do not have a capability to provide 100-year flood protection. However, the need for additional emergency work in the Cowlitz River area in fiscal year 1984 will depend upon sediment infill which occurs during the winter of 1983–84. We will analyze the effects of river infill and determine emergency work that might be necessary prior to next winter.

Question. Does the Corps have adequate authority under Public Law 84–99 to provide 100-year protection to developed areas along the Cowlitz?

Answer. As we previously stated, the Corps authority under Public Law 84–99 is to provide assistance in the event of life-threatening flood or disaster. The Corps does not have authority to provide 100-year flood protection, per se, under Public Law 84–99 without the immediate threat of flooding being present.

Question. The Corps plan for addressing flood control issues on the Toutle and Cowlitz Rivers and the Spirit Lake problem is scheduled for release in November 1983. What are the major options being considered under the plan?

Answer. Among the options which are being considered are: (1) Raise levees; (2) modify highway and railroad bridges; (3) single debris retention structure; (4) planting on debris flow; (5) multiple debris retention structures; (6) dredge Columbia River; (7) Cowlitz River erosion control; (8) Cowlitz River dredging; (9) sediment and stabilization basin and channel constrictions; (10) floodproofing; (11) permanent evacuation; (12) land use regulation; and (13) no action.

Question. When will the plan be available to the Senate Appropriations Committee?

Answer. We are committed to report to the President by November of this year. We will make the report available to the committee as soon as possible.

Question. Will a request for authorization of the Mount St. Helens project be included in the comprehensive plan?

Answer. The report forwarded to the President will identify the best plan to reduce the long-term problem of Mount St. Helens. Dependent upon the results of the study, a decision as to whether authorization is required will be made at the time the report is finalized.

PUDGET SOUND AND ADJACENT WATERS STUDY, WASHINGTON

Question. Funding for a study of a coordinated levee system for the lower Snohomish River was not included in the fiscal year 1984 budget. What is the Corps capability for this study?

Answer. We have no capability to initiate this study in fiscal year 1984.

Question. Please provide us with a brief description of the purpose and scope of such a study.

Answer. Purpose of the study would be to develop a plan for reducing winter flood damage to approximately 70 miles of the mix of Federal and non-Federal levees and other improvements which provide limited protection to about 25,000 acres of primarily agricultural land along the lower Snohomish River. In recent years, considerable funds have been expended under the authority of Public Law 84-99 to conduct frequent emergency flood fighting and postflood repairs. The study would include determining the capability and stability of existing levees during major floods, extent of property damages resulting from major floods, and alternative plans for control of flooding to reduce damages.

COOPERATION IN WATER RESOURCES DEVELOPMENT

Chairman HATFIELD. Senator Stennis?

Senator STENNIS. Thank you, Mr. Chairman.

Mr. Chairman, I am greatly encouraged by the chairman's interest in this matter and the lengths he is going, as I understand, in getting a jobs bill in proper form. But I am really greatly encouraged. I find here the chances now for this critical situation to move forward with reference to balancing the budget or at least reducing the deficit—make some positive headway on that. I feel pretty good. It seems to me like there has been positive action there and we will probably move forward and make some real headway this year.

But if we are forced to wait on the enactment of users' fee legislation, why that could take several years, and will kill the interest and spirit of moving forward—out of the dark and into the brighter light. Let's get something moving even if it is just microscopic in size.

Chairman HATFIELD. They will multiply.

Senator STENNIS. Yes, sir.

Another thing, I see our friend from New Mexico, a new member of our subcommittee. We are greatly helped by his presence here. I want to mention again, that the first water project I ever saw was Carlsbad, N. Mex. They had just completed an irrigation project there and were making two bales of cotton to the acre. That made me jealous, because we were getting only one bale per acre in my State.

Senator DOMENICI. That is why he moved, Mr. Chairman.

Senator STENNIS. They have expanded that project several times, and now he is here on this committee.

Chairman HATFIELD. He will make three bales now.

Senator STENNIS. Or four. [Laughter.]

Very seriously, here is a chance to start some movement through the Chairman's efforts and plans, and I believe there will be an overwhelming interest in these small projects. You have to take it slow at first. I am not only thinking of Gulfport Harbor in Mississippi, where we have a fine port, but it is logjammed and doesn't have enough depth—you can't get out to the sea. You have just got to have a project. I am thinking of the numerous projects that will start to turn this employment situation around. You have got them. Your files are full. Don't you have a list of these continuing—I guess what name you apply to it, the continuing authority program? Last year we left that off, we reduced it. Don't you have a drawer full of these small projects, almost finished, the blueprints?

Mr. GIANELLI. Senator Stennis, could I respond.

Senator STENNIS. I am not finished. I don't want you to respond too long on my time. [Laughter.]

Yes, please go ahead.

Mr. GIANELLI. I just want to say the chairman made it very clear to me yesterday in a conversation he didn't think very much of tying in a jobs bill to user fee legislation, but I would like to present the other side of the coin. That is, if we had some user fee legislation, we could take whatever Federal dollars we could get and spread them much further. So, I would be hopeful you wouldn't reject some aspect of user fee legislation as we look at, for example, the jobs bill.

Senator STENNIS. Well, my thought is for the time being, Mr. Chairman, I don't want any big measures, for my opinion they are hard to vote, but then some kind of a plus program going along and evidence of getting started here and there, scattered around, and getting some of these employment needs met in a small way. Ten or twelve men go to work on a little project, that itself would stir things up. So ordinarily I want to wait for the authorization, but I think we have to stir things up and have measures what the Chairman has in mind. I certainly support him.

Chairman HATFIELD. Thank you, Senator.

Do you have other questions you wish to ask?

Senator STENNIS. I have used my time. If you get back to me, I may have an additional question or two.

Chairman HATFIELD. Senator Domenici?

NEW JOB PROPOSAL

Senator DOMENICI. Mr. Chairman, this is my first opportunity to appear as a member of your committee, and I have a few questions. I will submit a couple of them in writing to be answered. If this one is redundant, right off the top, just tell me so.

Did you provide the subcommittee with whatever evidence you have regarding the President's new jobs proposal as it might impact on the Corps? Are we aware of that now?

Mr. GIANELLI. Senator, the chairman asked for that and we are going to supply it. We don't have it, but I think that was included in the questions he asked us to provide information on.

OFFSETTING REVENUE

Senator DOMENICI. Very well.

I note in the overall budget that you assume $450 to $460 million in user revenues. Do you know when you are going to send that legislation up?

Mr. GIANELLI. Yes, sir, I would hope within the next 30 days. The Army has drafted a proposal that is now before the Office of Management and Budget. I am hopeful we will get clearance on that shortly to submit to the Congress.

Senator DOMENICI. Without going into detail, can you quickly break down what you are going to charge, what activities, to get this $454 million?

Mr. GIANELLI. If I could relate it, Senator, I think the question was addressed earlier, but let me respond again.

Senator DOMENICI. Has it been asked?

Chairman HATFIELD. Yes, Senator. We have gone over the user fee issue and the emergency job issue, and the interrelationship in this budget to those issues. But if you wish to pursue them again, it is perfectly all right.

Senator DOMENICI. I don't want to use time just to be wasting it.

I heard that the deep port activities were in some way related to the President's proposal. I assume that there must be a user fee of some type attached to those. Is that part of the testimony?

Mr. GIANELLI. Yes, sir. There was an assumption in the budget there would be a certain amount of money recovered to offset O&M programed expenditures for the deep-draft ports. As I recall, the projections in offsetting receipts amounted to 60 percent of the budgeted O&M for those projects, a level which would be recovered if the legislation now under preparation is enacted. So the legislation the administration recommends to the Congress should include a recovery proposal consistent with the budget.

Senator DOMENICI. Was that expected to be included as part of the accelerated jobs program to take place shortly?

EMERGENCY EMPLOYMENT BILL

Chairman HATFIELD. Senator, that was really only a leak from within various discussion groups. In a meeting 2 hours ago with the White House and other representatives, there appears to be, at this point, a withdrawal as far as the White House making that a part of the immediate jobs proposal. What they want is things not contingent upon legislation or long-term action, but immediate action, and I think there is now the general consensus that that would not be a practical thing to try to create and couple that with the jobs bill. What we are really trying to do now in the latest discussions I have had with members of the White House staff is we want an accommodation that can bring forth these jobs notwithstanding the follow up of some of these other proposals, including user fees.

Senator DOMENICI. I thank the chairman. While I am an advocate of user fees, we have several differing views as to how to get it done, and I don't see how we can accomplish it on this measure. It would just take too long to resolve these major policy questions.

NATIONAL WATERWAY STUDY

Just two more questions. Do you have a current estimate of how much it would cost, the annual needs, for construction and rehabilitation of the inland waterway system? If the span you are looking at is over the next 20 years, have you estimated that?

Mr. Gianelli. We will have a figure on that in the Corps' study, Senator. Unless General Bratton would have the figure, it is something we will have, but I don't have it right now.

Senator Domenici. My last question——

Chairman Hatfield. Would the Senator yield? Do you still expect to be able to transmit the national waterway study by March 1 as we requested?

Mr. Gianelli. Senator, we wrote you on that. I think we have some practical problems. We want to give you whatever information we have as of that time, but the study has to go through a process which will not allow us to comply with your March 1 request. I think in my response to you I have indicated we will give you whatever we have, but it is going to take longer than that to go through the process.

Chairman Hatfield. Thank you.

Thank you, Senator, for letting me interrupt.

NATIONAL WATER POLICY REFORMS

Senator Domenici. One last question. I think since you have been in office you have talked about some kind of comprehensive reform of the national water policy and indicated that it is desirable. Can you tell us, do you intend to submit substantive legislation this year to overhaul water policy, including financing, cost sharing, and the like?

Mr. Gianelli. Senator, there are two parts to the package as I see it. One is the planning process. The administration is in the final process now of completing the revised principles and guidelines with respect to water resource planning. The President, on February 3, approved proposals for the new guidelines which will prevail in connection with the formulation of water projects. That has to be published in the Federal Register, but the revisions are in the final stages. Now, that is one part I think will be behind us as far as the administration is concerned.

The other part relates to cost sharing, and let me report on the current status of that for the benefit of the committee. The Assistant Secretary's Working Group of the Cabinet Council on Resource and Environment worked for about a year on the subject of cost sharing, and last May we presented a proposal to the full Cabinet Council with respect to revisions in cost sharing formulas for various types of uses for water projects. The proposal was not submitted to the President for a variety of reasons, all of which I am not familiar with. But, at any rate, the Cabinet Council again reviewed the proposal in the last month or so and sent out, through Secretary Watt, a request to the Governors asking for their comments on cost sharing. It would be my expectation that after receipt of their comments, sometime perhaps in April or later this spring, the President will formally submit to the Congress specific recommendations with respect to the exact amount of cost sharing and up-front financing that the administration as a whole would recommend with respect to the different types of water uses.

ARMY'S PROPOSALS

Now let me hasten to say the Army has proceeded in 1983 and 1984 on the basis of certain assumptions with respect to the cost-sharing issue, and we have made certain proposals that are included in our fiscal years 1983 and 1984 budgets with respect to cost sharing. We would hope that the Congress would authorize the Army to go ahead with a number of new starts in fiscal years 1983 and 1984 under our new cost-sharing proposals, with the understanding that if the Congress changes the guidelines or changes the rules with respect to those cost-sharing percentages that we have assumed, that we will, of course, adjust our program.

So, I guess the long and short of the response to you, Senator, is that the administration will have some recommendations, hopefully this spring, with respect to cost sharing for the various types of projects. The Corps already has assumed some for our fiscal years 1983 and 1984 budgets, and we are hopeful the Congress will go ahead with those until it addresses the overall issue.

Senator Domenici. Thank you, Mr. Chairman.

Questions Submitted by Senator Domenici

Albuquerque Levees and Santa Fe Flood Control Project

Question. Please describe, specifically, what is in the budget for engineering and survey work on the Albuquerque levees and the Santa Fe flood control projects in New Mexico. How much money will still be needed to be spent before construction can begin on each of these?

Answer. The fiscal year 1984 budget does not include any funds for survey work on the Albuquerque levees. However, subject to the qualifications previously stated, we have a capability of $1 million to continue planning and engineering for the section of the Rio Grande and tributaries, New Mexico study addressing the middle Rio Grande, Bernalillo to Belen. Funds in the amount of $156,000 have been requested in the budget to complete planning.

Breakdown of User Charge Revenues

Question. Would you please break the $454 million in user charge revenues down?

Answer. Of the $454 million user revenues, $213 million is associated with inland navigation cost recovery, $225 million is for deep-draft navigation cost recovery, and $16 million is from recreation user fees for day use activities for which the Department of the Army is proposing increased legislative authority. We expect all user fee legislation to be submitted during the month of March.

Cost-Sharing Legislation

Question. You have said that, "We would be the first to agree that comprehensive reform of national water policy is important and desirable, particularly as related to the financial aspects." Can you tell us whether you expect substantive legislation to be forwarded this year in areas beyond that of navigation?

Answer. I do not expect the administration to submit legislation this year for reform of cost sharing in areas other than navigation except, of course, for the recreation user fee proposal that I mentioned earlier.

Cost Sharing for Studies and Design

Question. Could you describe for us some of your proposals on cost sharing in relation to studies and design work?

Answer. Beginning in fiscal year 1983, all new preauthorization studies of specific projects, whether proposed as interim studies or as in full response to a study resolution, will be undertaken in two phases; namely, a reconnaissance phase and a feasibility phase. The first phase will be financed 100 percent with Federal funds and normally will be completed within a year, but may, in demonstrated unusual circumstances, extend to a maximum of 18 months. The second phase will be cost shared 50/50 with local project sponsors. Not more than one-half of the non-Federal share may be in-kind.

We believe that this process will avoid wasting Federal funds on studies which do not lead to project implementation and will lead to construction of Federal projects that are fully responsive to local concerns.

Deep-Draft Port Financing

Question. In relation to deep-draft port construction, do you believe that some percentage of upfront non-Federal financing is absolutely essential to a workable approach, and that the higher the percentage, the greater the likelihood that the Nation will focus its spending only on projects that are truly needed?

Answer. I believe that upfront non-Federal financing is essential in the case of deep-draft port construction. Federal funds are simply not available to finance substantial new work according to historic financing formulas. While there is no question but that a non-Federal financing requirement does serve as an effective device for screening out the best projects, I do not believe that that requirement need be 100-percent non-Federal financing. Indeed, I believe that effective screening of projects can be accomplished with a non-Federal contribution substantially less than 100 percent.

CRISIS IN WATER USE

Chairman Hatfield. I would just like to follow up with a comment on Senator Domenici's question.

Mr. Secretary, long before you came into this position, this committee has been urging a comprehensive program as it relates to water policy. I am hopeful that we can see it come about under your administration. I have frequently stated the case I feel we are facing a crisis far greater than the Arab oil embargo as it relates to water, not only comprehensive use of water in navigation but in all facets of water use.

I need not recite again the litany that there have been cities reduced to a 30-day water supply and the infrastructure needs related to water delivery in many of our major cities is in critical need of repair or upgrading or updating. That is also true of navigation, locks and dams, and other aspects of water resource development. Until we get a total, comprehensive water policy in this country, I think we are really courting disaster, at least maybe isolated disaster. It is going to proliferate very rapidly once it gets started in some area of population. In my view, that policy must be based on law in order that every one can know what is possible and can predict and plan for the future with some sense of certainty. I don't think it can be considered alone, in isolation, say navigation, because that is only one of the many uses of water. We see that crisis that you were working with now as it relates to future of the Columbia River and the Toutle and Cowlitz problems of Mount St. Helens. Three million yards of earth at $3 million. A dollar a yard, is that what it costs? Is that what your testimony was?

Mr. GIANELLI. I mentioned that by spring the Corps will have dredged almost 3 million cubic yards of silt from the Toutle at a cost of $3.85 million. Dredging on the Toutle averages between $1.60 and $2 per cubic yard.

LAKE DARLING, N. DAK.

Chairman HATFIELD. Senator Burdick?

Senator Burdick. I am pleased to note you have included $1 million in the fiscal year 1984 budget for the Lake Darling project in North Dakota. Can you describe for me what work you expect to take place on the project in fiscal 1984?

Mr. GIANELLI. I think the budget amount you have described includes funds to make engineering and design decisions, Senator, and such other work as necessary preceding any awards for construction of the project.

Senator BURDICK. What is the projected timetable for completion of the project?

Mr. GIANELLI. I don't have a timetable, Senator. Let me say also, I know you have been concerned about this and whether or not there is going to be any specific request for cost sharing of that project.

Senator BURDICK. I am coming to that.

COST-SHARING PROPOSAL

Mr. GIANELLI. I thought I would jump the gun and beat you to the punch. I know it is a matter of interest to you.

Let me say what we are trying to do overall is to try and spread the Federal dollar as far as we can and get the most in the way of Federal water projects. As we develop new policies, there are going to be transitions which I think are going to be necessary as we go from whatever the policy may have been in the past to whatever it will be in the future. And, I think with respect to Lake Darling, we haven't just faced the prospect of any cost-sharing proposals and have not talked to the local people about that. We have included funds so there will be no delay with respect to work we are doing this year, but certainly the overall problem has to be addressed in the very near future.

Senator BURDICK. Last year when you appeared before this subcommittee you indicated to me that your cost-sharing proposal would apply only to new starts.

Mr. GIANELLI. That is correct, Senator.

Senator BURDICK. Thereby excluding projects such as Lake Darling which, as you know, was authorized in 1970. However, I am hearing from my friends in Minot that the Corps representatives have been less than subtle in their mission to get a local agreement for cost sharing.

Mr. GIANELLI. We haven't fully addressed that with respect to Lake Darling, but we have had the same reports back from the Corps. I think what we are going to ask the Corps to do is wait and see how Congress deals with the problem and see exactly how we should proceed, because, as I indicated in my complete statement, there are a number of projects that are going to get caught in the transition from whatever past policy is to whatever the future policy may be. I would expect as those issues are addressed, the Congress will have specific instructions to give us.

Senator BURDICK. What you are telling the committee, Mr. Secretary, is the question of cost sharing will be addressed by the Congress at a later date?

Mr. GIANELLI. I am hopeful it isn't going to be too much later, and what I hope we are going to be able to do is come back to the Congress specifically in the months ahead with respect to certain suggestions, certain proposals, but certainly Congress has got to have a major input on what happens. There is no quarrelling there.

Senator BURDICK. But what I am getting at now is, there is no legal authority for cost sharing.

Mr. GIANELLI. What we are trying to do again, Senator, is spread the Federal dollars as far as we can on an equitable basis. I understand exactly what you are saying with Lake Darling. Lake Darling involves enlargement of the existing levees and construction of levees. Whether we are able to fit this in any range I guess I am not prepared to say, but I understand fully your position.

Senator BURDICK. The point I am making, there is nothing in the basic law of the land that there will be cost sharing. That will be addressed, you say, in a few weeks.

Mr. GIANELLI. Well, I am saying the proposals that we have in our 1983 and 1984 budgets suggest certain new starts on water projects throughout the country and have assumed certain cost sharing. The Congress has made its position very clear in the reports you have submitted, indicating that you feel very strongly Congress has got to have a major say with respect to those policies, and we respect that. And we will be back to you with respect to those policies. I am just not quite ready yet to say where we are going to come down with respect to Lake Darling, but I know we will have a chance to get your input.

Senator BURDICK. You are aware of my interest.

Mr. GIANELLI. Yes, sir, we are very aware of that. You have made that very clear, Senator.

Senator BURDICK. You will also have to address the question what is a new start, I presume.

Mr. GIANELLI. Yes, sir.

Senator BURDICK. Thank you very much.

Chairman HATFIELD. Thank you.

Any other questions?

Senator DOMENICI. Mr. Chairman?

Chairman HATFIELD. Senator Domenici.

ACTION ON DEEP-PORT LEGISLATION

Senator DOMENICI. I have no further questions. Could I just make an observation. Seeing Senator Abdnor here and knowing that there is a great interest in accelerating the deep-draft port program in this country, I think you know, Mr. Chairman and members of the committee, that he has spent a great deal of time and effort conducting hearings regarding the deep-draft port needs of the country. I would just share with you, Mr. Chairman, when he first started those hearings, the bills that were introduced were all leaning in the direction of having the Corps proceed to start some deep-draft ports, kind of on a first-come-first-serve basis. By the time we finished hearing from all the authorities in the country, it became quite obvious that the best way to get the best ports started was to have some up-front money required by the ports, and I think that is how the legislation ended up being drafted. We will have long disputes over how they charge, but I think supply and demand applies to the ports just as well as everything else. You will find if we choose to pick which three or four get built and we tell them to build them, we are just as apt to build the wrong ones as right ones. If, on the other hand, we have the port authorities or States come up with some up-front money, they will find these generally on the basis of real need. I was amazed and I share that with you. I didn't think there was any relationship. I thought we just ordered the Corps to go pick Virginia and build one and maybe go down to Alabama and build one. But almost every expert that came said if you require the port authority to get the plans ready and indicate they have some money generated and you come in and give them expedited treatment, it really will solve the problem. And I think that is what all the testimony revealed, was it not? Are you going to complete legislation along that route quickly in that area?

Senator ABDNOR. If we can get together with the administration.

Chairman HATFIELD. I assume that you also meant that to include inland waterways and the total navigation system?

Senator DOMENICI. I don't know what he intends.

Senator ABDNOR. Well, when we have hearings, we will try to take both subjects up in hearings as we go along. We had what we thought was a reasonably good ports bill, in the consensus at least of the committee, but we found considerable differences of opinion among Members of the Senate.

Senator DOMENICI. Thank you, Mr. Chairman.

QUESTIONS SUBMITTED BY SENATORS BYRD AND CHILES

Chairman HATFIELD. Thank you, Senator.

Senator Byrd was detained with other business and may have questions to submit for the record. Senator Chiles, likewise, has questions to submit.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR BYRD

TUG FORK, W. VA.—SECTION 202 PROJECT

Question. Mr. Gianelli, you and I have talked recently about the flood protection projects which Congress has directed the Corps of Engineers to construct in the Tug Fork Valley in southern West Virginia. You have indicated to me that, because of certain delays, fiscal year 1984 requirements for the Tug Fork area can be conducted within the $600,000 budget request together with some prior-year appropriations that are expected to remain available at the end of fiscal year 1983; isn't that correct?

Answer. You are correct. Additional funds for the project will not be required in fiscal year 1984.

Question. Is it your intent to obligate all of these remaining funds in fiscal year 1984?

Answer. The budget request of $600,000 and the scheduled unobligated carryover from fiscal year 1983 of $12 million are scheduled to be obligated in fiscal year 1984.

Question. Mr. Gianelli, do you intend to request funds in the fiscal year 1985 budget for the section 202 flood control projects; and, if so, how much do you anticipate requesting and for which specific projects?

Answer. The earnings through fiscal year 1985 on contracts scheduled for award in fiscal years 1983 and 1984 for Williamson, Pineville, and Barbourville are expected to exceed the funds available through fiscal year 1984. At a minimum, the funds needed to continue these contracts in fiscal year 1985 will be requested in the fiscal year 1985 budget. Beyond that, the amount requested for the Army's civil works program in the President's budget for fiscal year 1985 will be the appropriate amount consistent with the administration's assessment of national priorities for Federal investments and the objectives of avoiding larger budget deficits. The amount for the section 202 project will be determined after detailed analysis and prioritization of all fiscal year 1985 requirements to make maximum effective use of available resources.

QUESTIONS SUBMITTED BY SENATOR CHILES

SUWANNEE RIVER, FLA.

Question. Local sponsors were advised on February 4, 1983, that the fiscal year 1983 appropriation for the Suwanee River study was slipped back from the approved $530,000 to $380,000. Please advise the reasons for this cutback.

Answer. The $380,000 allocated for fiscal year 1984 is less than had been considered due to a reduction assigned to this, as well as many other studies, as part of a nationwide reduction in the general investigations account which was necessary because of the funds allowed under the Further Continuing Appropriations Act, 1983.

Question. President Reagan's recommendation for funding for the study for fiscal year 1984 is zero. Please explain the reasons why no funding was recommended and provide the capability of the Corps to utilize funds in fiscal year 1984 and for this purpose in this fiscal year if funds were provided.

Answer. The study is not included in the President's fiscal year 1984 budget because the Corps of Engineers has concentrated the limited budgetary resources available for the regular survey program on those feasibility studies most likely to result in implementation of a project to solve existing water resource problems. The primary output of this expensive ($1.6 million) planning effort would be flooded area mapping and predictive flood modeling for local use in water and land resource management. The fiscal year 1984 capability to continue the study, subject to the previously stated qualifications for capabilities, is $280,000.

Question. Local sponsors were also concerned about the Corps questioning authority under the resolution to spend money for data collection and development of a nonstructural water management program. Please advise as to any change in posture of the Army Corps of Engineers from July 1981 when assurances were provided that the work needed by the local sponsors could be accomplished.

Answer. In light of the severe budgetary austerity, we are unable to fund all surveys started in the past. The fiscal year 1984 budget focuses on type of surveys which address existing problems and which have a high possibility of producing a plan in which there is a clear Federal interest and of the type that the Corps is uniquely capable of implementing.

Question. In July 1981, the Corps estimated that the time to complete the study would remain at 4 years. Please provide information as to the funding levels necessary for this fiscal year and those following to accomplish the study results in 4 years.

Answer. The total estimated study cost is $1,648,000. Allocations through fiscal year 1983 total $430,000. To complete the study in 3 years would require annual funding of $280,000, $450,000, and $488,000 successively.

Question. I would appreciate any further comments you can make regarding to what extent and on what conditions, the U.S. Army Corps of Engineers can play a role in assisting State and local government's development of a nonstructural comprehensive basin program.

Answer. Beyond the regular survey program, the Corps has two general investigations programs which can play a role in assisting State and local governments in the development of a nonstructural comprehensive basin program. One program is the Corps' flood plain management services program which is limited by legislation to $15 million in annual appropriations. For 20 years the Corps has prepared flood plain maps and responded to countless requests for information concerning the flood threat. The second program is the section 22 assistance to States program. This nationwide program enables the Corps to help States with development of their own comprehensive water resource plans. Under the guidelines prescribed by legislation, funding is limited to $200,000 per year per State, with a total nationwide funding ceiling of $4 million annually.

ADDITIONAL SUBCOMMITTEE QUESTIONS FOR THE RECORD

Chairman HATFIELD. I also have some additional questions covering various subjects, which have been prepared by the committee staff. If there is no objection, I will place those in the record at this point for your response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY CHAIRMAN HATFIELD

NAVIGATION USER FEE RECEIPTS

Question. The budget indicates a total appropriation requirement of $2,594,100,000 for all Corps of Engineers' activities, yet you have only requested $2,102,100,000. The difference—$492 million—is anticipated from receipts under existing law—$38 million—and receipts anticipated under proposed legislation—$454 million.

Why is the request adjusted for anticipated receipts the vast majority of which are contingent on enactment of legislation in areas where there seems to be no agreement; that is, user fee legislation? What would be the impact on Corps of Engineers activities if these receipts are not realized?

Answer. While no consensus emerged from the 97th Congress on the question of user fees, I think that there has been a great deal of constructive dialog. I am most optimistic that cost-recovery legislation will be enacted this year.

If the projected user fee receipts were not realized, the Corps of Engineers' activities would not be impacted. The size of the Federal deficit would, however, be increased by the amount of the shortfall between actual and projected fees.

REFORMULATION OF THE INVESTIGATIONS PROGRAM

Question. I see that you are proposing a reformulation of the studies and investigations programs. Could you explain the new procedure in a little more detail, particularly how long the reconnaissance phase and the detailed study phase are expected to take?

Answer. The reconnaissance phase of a study is to take 12 months and, when necessary for complex cases, up to 18 months. This phase of a study will be financed by the Federal Government and will result in (1) a definition of the problems and opportunities and identification of potential solutions; (2) a determination of whether or not the study should proceed to the feasibility phase, based on a preliminary appraisal of costs, benefits, and environmental impacts of potential alternative solutions; (3) an estimate of the cost of the feasibility phase; and (4) identification of a local sponsor for the feasibility phase and an indication of willingness and ability to contribute 50 percent of the cost of that phase.

We would anticipate that the feasibility phase of a study would take 2 to 4 years depending on the complexity of the problems. The Corps would budget for one-half the annual requirements and the local sponsor would be expected to provide the other half. No more than 50 percent of the local share would be in-kind effort.

Studies that move to the feasibility phase under this procedure should result in a higher success ratio in terms of recommendation of implementable projects.

RECREATION FACILITY CONSTRUCTION AND OPERATION

Question. What actions have you taken to maximize the recreational benefits at Corps of Engineers projects nationwide as directed by the committee in our report last year? What are the criteria used in determining if a site is to be closed? Is an analysis of the economic impact and loss of jobs being undertaken?

Answer. In February 1983, we provided our division commanders with further guidance about fine-tuning our recreation program. In this guidance, we deemphasized closures of additional recreation areas as a primary cost-cutting measure. We will re-evaluate the economic impacts of closures of potentially significant areas and, in those particular instances where the economic benefits from our program contribute to local economic stability, take this into consideration on decisions on whether to reopen those sites. We will continue to look at our recreation program generally to determine where we can maximize recreation benefits in the interest of sustaining or improving local economic and unemployment conditions.

As I indicated, recreation area closures have been deemphasized. However, if it is determined that an additional site, or sites, should be closed in the interests of program efficiency, our criteria for selection of these sites will be slightly modified from fiscal year 1983 criteria. In addition to area location, accessibility, cost per visitor, and whether closure of the area would benefit adjacent areas, we also asked that district and division commanders be especially alert for any overwhelming considerations where local economic and employment conditions are heavily dependent on the operation of recreation areas.

FISCAL YEAR 1984 CAPABILITIES

Question. Are you under any order or directive from OMB or any other source that would prohibit you from fully and freely responding to the questions of this committee?

Answer. We are under no restrictions that would prohibit us from responding to any questions you may have.

Question. Could you provide for the record a complete list, by project, of the Corps of Engineers funding capability for fiscal year 1984, including a brief description of how the additional funds will be utilized?

Answer. Yes sir, we will. However, to be meaningful, a capability not only should be reflective of the preconstruction planning and engineering required prior to the construction of a project, but also the competition for available funds and manpower. This is the basis for the amounts proposed in the President's budget for Army's fiscal year 1984 civil works program and is consistent with the administration's assessment of national priorities for Federal investments and the objective of avoiding larger budget deficits and more serious adverse effects that Government borrowing can have on the national economy. Nevertheless, the list you have requested is being provided, even though each cited capability amount is for a project or study, considering that project or study by itself without reference to the rest of the program. It also should be pointed out that while additional funds for some individual studies or projects could be utilized, as indicated in the list, offsetting reductions would be required in order to maintain the President's budgetary objectives.

[The information follows:]

CAPABILITIES FOR STUDIES UNDERWAY

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ALABAMA					
N	ALABAMA-COOSA RIVER BELOW CLAIBORNE L&D, AL	2,002	390	459	459
N	APALACHICOLA RIVER "S&B", AL, FL & GA	2,302	1,052	0	250
FDP	TOMBIGBEE RIVER AND TRIBUTARIES, AL & MS	2,767	682	0	185
	STATE SUB-TOTALS	7,071	2,124	459	894
ALASKA					
N	NORTHWESTERN ALASKA HARBORS, AK	708	156	0	130
FDP	RIVERS AND HARBORS, AK	8,970	1,851	300	500
FDP	SMALL HYDROPOWER, AK	4,670	3,035	800	950
N	SOUTHCENTRAL DEEP-DRAFT NAVIGATION, AK	1,958	1,081	200	350
	STATE SUB-TOTALS	16,306	6,123	1,300	1,930
ARIZONA					
FDP	GILA RIVER AND TRIBUTARIES, AZ & NM	4,160	2,845	530	880
	STATE SUB-TOTALS	4,160	2,845	530	880
ARKANSAS					
FDP	ARKANSAS RIVER VICINITY OF FT SMITH - VAN BUREN, AR	1,270	1,128	142	142
N	ARKANSAS RIVER & TRIB, HYDROPOWER & OTHER PURPOSES, AR & OK	2,690	2,268	422	422
FDP	CLARKSVILLE, AR	950	283	100	300
FDP	OUACHITA RIVER BASIN, AR & LA	7,760	5,945	696	1,366
COM	RED RIVER BELOW DENISON DAM, AR, LA, OK & TX (AUTH RPTS)	1,770	992	460	460
	STATE SUB-TOTALS	14,440	10,616	1,820	2,690
CALIFORNIA					
FDP	ALAMEDA CREEK, UPPER BASIN, CA	1,365	1,190	175	175
FDP	ANTELOPE VALLEY, CA	985	545	0	100
FDP	CALLEGUAS CREEK, CA	1,775	1,015	0	250
SPE	COAST OF CALIF, STORM AND TIDAL WAVES, CA	7,390	995	750	1,500
N	COAST OF NORTHERN CALIFORNIA, CA (HBRS FOR LIGHT DRAFT VESSELS)	1,025	911	0	114
FDP	GUADALUPE RIVER, CA	1,961	1,791	170	170
N	HUMBOLDT HARBOR AND BAY, CA	1,395	834	0	250
N	LOS ANGELES AND LONG BEACH HARBORS (INCL SAN PEDRO BAY MODEL), CA	6,612	6,356	256	256
FDP	LOS ANGELES COUNTY DRAINAGE AREA REVIEW, CA	3,665	2,293	820	820
FC	MORRISON CREEK STREAM GROUP, CA (PHASE II)	3,000	1,500	1,000	1,000
N	MORRO BAY HARBOR, CA	756	154	0	230
N	NORTH COAST OF LOS ANGELES COUNTY, CA	550	165	0	80
FDP	NORTHERN CALIFORNIA STREAMS, CA	8,602	6,197	0	136
N	OCEANSIDE HARBOR, CA	790	680	0	100
N	REDONDO BEACH HARBOR (KING HARBOR), CA	185	40	0	85
FDP	SACRAMENTO RIVER & TRIBS (BANK PROT & EROS CONTROL), CA	2,500	2,361	139	139
N	SAN FRANCISCO BAY AREA (IN-DEPTH), CA	3,110	2,657	0	325
FDP	SAN FRANCISCO BAY SHORELINE, CA	3,555	1,135	600	1,050
N	SAN LEANDRO BAY, CA	730	50	0	160
FDP	SAN LUIS OBISPO COUNTY, CA	945	405	0	300
FDP	SANTA ANA RIVER & ORANGE COUNTY, CA	8,300	6,567	122	675

CAPABILITIES FOR STUDIES UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
FDP	SANTA BARBARA COUNTY STREAMS, CA	1,376	809	325	425
FDP	WALNUT CREEK BASIN, CA	678	574	0	100
	STATE SUB-TOTALS	61,235	39,134	4,357	8,440
COLORADO					
FC	ARK R & TRIBS ABOVE JOHN MARTIN DAM, CO (PHASE I)	4,370	2,599	140	140
	STATE SUB-TOTALS	4,370	2,599	140	140
CONNECTICUT					
COM	CONNECTICUT RIVER BASIN, AUTH REPORTS, CT, MA, & NH	3,985	2,526	0	365
COM	LONG ISLAND SOUND - AUTH REPORTS (THAMESVILLE TIDAL FLOOD MGT), CT	420	85	0	150
SPE	LONG ISLAND SOUND - DREDGED MATERIAL CONTAINMENT STUDY, CT	1,890	1,474	325	325
	STATE SUB-TOTALS	6,295	4,085	325	840
FLORIDA					
N	BISCAYNE BAY, FL	2,412	80	0	250
FDP	CENTRAL AND SOUTHERN FLORIDA WATER SUPPLY, FL	2,192	1,792	400	400
N	CHARLOTTE HARBOR (BOCA GRANDE), FL	459	51	125	125
FDP	GOLDEN GATE ESTATES, FL	1,289	712	0	250
FDP	KISSIMMEE RIVER, FL	2,490	2,283	207	207
SP	MARTIN COUNTY, FL	371	295	76	76
N	MEXICO BEACH INLET, FL	250	65	0	110
N	MIAMI HARBOR CHANNEL, FL	337	225	112	112
N	PALM BEACH HARBOR, FL	177	98	79	79
N	PORT SUTTON CHANNEL, FL	290	50	0	150
FDP	SIX MILE CYPRESS SLOUGH, FL	403	109	0	200
FDP	SUWANNEE RIVER, FL	1,698	430	0	280
	STATE SUB-TOTALS	12,258	6,190	999	2,239
GEORGIA					
FDP	BRUNSWICK, GA	1,420	425	0	450
FC	DALTON LAKE, GA (PHASE I)	2,275	496	190	419
FDP	NORTHEAST GEORGIA REGION, GA	1,350	365	400	400
N	SAVANNAH HARBOR COMPREHENSIVE, GA	1,609	1,441	168	168
	STATE SUB-TOTALS	6,650	2,727	758	1,437
GUAM					
N	HARBORS & RIVERS IN THE TERRITORY OF GUAM, GU	3,200	2,796	96	250
	STATE SUB-TOTALS	3,200	2,796	96	250
HAWAII					
FDP	HARBORS & RIVERS IN HAWAII, HI	3,709	2,967	317	317
IDAHO					
FDP	COLUMBIA RIVER AND TRIBUTARIES, ID, MT, OR & WA	22,669	12,892	1,095	1,800
FDP	PALOUSE RIVER & TRIBUTARIES, ID & WA	729	197	0	100
FDP	UPPER SNAKE RIVER AND TRIB., ID & WY	5,613	4,056	550	750
	STATE SUB-TOTALS	29,011	17,145	1,645	2,650
ILLINOIS					
FDP	ALEXANDER AND PULASKI COUNTIES, IL	750	311	0	250
FDP	CHICAGO - SOUTH END OF LAKE MICHIGAN, IL & IN	4,403	3,381	140	140
MP	CHICAGOLAND UNDERFLOW PLAN, IL (PHASE I)	9,032	7,427	865	1,153
SPE	DIVERSION OF LAKE MICHIGAN WATER AT CHICAGO, IL	1,961	1,751	0	210
FDP	FOX RIVER & TRIBUTARIES, IL & WI	2,328	2,137	191	191
SP	ILLINOIS SHORE OF LAKE MICHIGAN, IL	1,516	185	0	440
FDP	MACKINAW RIVER BASIN, IL	869	55	0	200
FDP	MISS RIVER, COON RAPIDS DAM TO OHIO RIV, IL, IA, MN, MO & WI	8,411	4,750	1,484	1,484
FDP	OHIO RIVER MAIN STEM, IL, IN, OH, PA & WV	10,450	2,899	1,345	2,030
FDP	RICHLAND CREEK, IL	1,015	809	116	116
	STATE SUB-TOTALS	40,735	23,659	4,141	6,214

CAPABILITIES FOR STUDIES UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
INDIANA					
FDP	LITTLE CALUMET RIVER BASIN, IN (CADY MARSH DITCH)	155	120	35	35
COM	WABASH RIVER BASIN COMPREHENSIVE (AUTHORIZATION REPORT), IN & IL	2,642	1,672	80	170
	STATE SUB-TOTALS	2,797	1,792	115	205
KANSAS					
FDP	ARK RIV & TRIBS GREAT BEND KS TO TULSA OK REMAINING, KS & OK	7,250	4,392	253	600
FDP	ARKANSAS RIVER FROM GREAT BEND TO JOHN MARTIN DAM, KS & CO	2,933	2,493	180	440
FDP	GRAND NEOSHO RIVER, KS & OK	3,350	575	0	400
FDP	KANSAS AND OSAGE RIVERS, KS	5,310	4,742	400	400
FDP	VERDIGRIS RIV, KS & OK	3,500	3,075	410	410
	STATE SUB-TOTALS	22,343	15,277	1,243	2,250
KENTUCKY					
N	BIG SANDY RIVER, KY, WV & VA	3,392	2,342	600	600
N	CUMBERLAND-TENNESSEE RIVERS, KY, AL, GA, MS, NC, TN & VA	5,835	1,487	300	700
N	GREEN AND BARREN RIVERS, KY & TN	1,586	958	150	150
FDP	KENTUCKY RIVER AND TRIBUTARIES, KY	2,292	1,472	350	350
FDP	UPPER CUMBERLAND RIVER BASIN, KY & TN	3,504	1,239	200	200
	STATE SUB-TOTALS	16,609	7,498	1,600	2,000
LOUISIANA					
FDP	ALOHA-RIGOLETTE AREA, LA	850	655	175	175
N	GULF INTRACOASTAL WATERWAY, LA - TX SECTION, LA & TX	4,055	2,043	0	405
FDP	LAKE PONTCHARTRAIN - WEST SHORE, LA	957	30	0	120
FDP	MERMENTAU, VERMILION, & CALCASIEU RVS & BAYOU TECHE, LA	5,690	1,392	460	620
	STATE SUB-TOTALS	11,552	4,120	635	1,320
MAINE					
N	FORE RIVER CHANNEL PORTLAND HARBOR, ME	430	252	115	115
SPE	PASSAMAQUODDY TIDAL POWER STUDY, ME	5,695	1,674	0	900
N	PORTLAND HARBOR, ME	340	145	0	150
FDP	SAINT JOHN RIVER, ME	3,670	1,398	380	380
	STATE SUB-TOTALS	10,135	3,469	495	1,545
MARYLAND					
SPE	CHESAPEAKE BAY STUDY, MD & VA	32,171	31,271	900	900
	STATE SUB-TOTALS	32,171	31,271	900	900
MASSACHUSETTS					
N	BOSTON HARBOR, MA	435	380	0	30
N	EAST BOAT BASIN, SANDWICH, MA	375	350	25	25
COM	SOUTHEASTERN NEW ENGLAND BOTH REPORTS, MA, RI & CT	1,666	1,396	100	200
	STATE SUB-TOTALS	2,476	2,126	125	255
MICHIGAN					
FDP	GREAT LAKES, PARTICULARLY LAKE ONTARIO & LAKE ERIE, MI	9,844	8,535	380	380
N	GREAT LAKES CONNECTING CHN, MI, IL, IN, MN, NY, OH, PA & WI	6,650	4,474	1,250	1,250
FDP	SAGINAW RIVER BASIN, MI	3,485	542	260	1,000
	STATE SUB-TOTALS	19,979	13,551	1,890	2,630
MINNESOTA					
FDP	MINNESOTA RIVER VALLEY, MN	9,335	3,628	0	975
FDP	SAINT CROIX RIVER, MN & WI	990	297	350	350
	STATE SUB-TOTALS	10,325	3,925	350	1,325

CAPABILITIES FOR STUDIES UNDERWAY—Continued

[Amounts in thousands]

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1988 APPROVED BUDGET	FY 1988 CAPABILITY
MISSISSIPPI					
N	MISSISSIPPI SOUND AND ADJACENT AREAS, MS & AL	2,097	2,011	76	76
N	PASCAGOULA HARBOR, MS	1,196	933	253	253
FDP	PASCAGOULA RIVER BASIN, MS & AL	2,135	1,526	305	305
FDP	PEARL RIVER BASIN, MS & LA	7,190	3,896	900	1,200
SPE	TENNESSEE-TOMBIGBEE WATERWAY SPECIAL STUDY, MS, AL, TN & KY	6,007	5,292	628	628
N	WOLF AND JORDAN RIVERS, MS	156	125	41	41
	STATE SUB-TOTALS	18,761	13,783	2,203	2,503
MISSOURI					
FDP	ST LOUIS METROPOLITAN AREA, MO & IL	11,150	7,265	1,490	2,090
FDP	STE GENEVIEVE, MO	820	720	100	100
FC	WEARS CREEK, JEFFERSON CITY, MO (PHASE I)	250	50	100	100
FDP	WHITE RIVER BASIN COUNTY LINE LAKE, MO	1,000	680	250	250
	STATE SUB-TOTALS	13,220	8,715	1,940	2,540
NEVADA					
FDP	TRUCKEE MEADOWS, NV	1,650	1,550	100	100
	STATE SUB-TOTALS	1,650	1,550	100	100
NEW HAMPSHIRE					
FDP	WINNIPESAUKEE RIVER, NH	700	613	87	87
NEW JERSEY					
N	DELAWARE RIVER COMPREHENSIVE NAVIGATION STUDY, NJ, PA & DE	5,000	713	950	950
FDP	HACKENSACK RIVER BASIN, NJ & NY	4,271	1,431	0	950
FC	PASSAIC RIVER BASIN STUDY, NJ & NY (PHASE I)	15,878	11,986	1,535	1,850
FDP	RARITAN RIVER BASIN, NJ	3,813	45	0	300
	STATE SUB-TOTALS	28,962	14,175	2,485	4,050
NEW MEXICO					
FDP	RIO GRANDE AND TRIBUTARIES, NM & CO	7,700	4,908	150	600
NEW YORK					
N	ARTHUR KILL CHANNEL HOWLAND HOOK MARINE TERMINAL, NY	667	469	155	155
N	BIG SANDY CREEK, MEXICO BAY, NY	617	172	0	200
N	BRADDOCK BAY STREET PARK, NY	425	75	0	100
N	BUFFALO HARBOR, NY	2,000	1,465	335	335
FDP	CATTARAUGUS CREEK, NY	386	59	0	100
COM	GENESEE RIVER BASIN, NY & PA (AUTHORIZATION REPORT)	745	185	0	100
N	GREAT LAKES - HUDSON RIVER WATERWAY, NY	6,270	1,073	0	150
N	JONES INLET AND FREEPORT LONG ISLAND, NY	548	541	43	43
SP	LAKE ONTARIO - ST. LAWRENCE RIVER, NY	3,650	1,000	0	600
N	NY HARBOR AND ADJACENT CHANNELS, NY & NJ	4,320	2,210	1,300	1,300
FDP	OSWEGO RIVER WATERSHED, NY	3,500	3,329	175	175
N	SAINT LAWRENCE SEAWAY, ADDITIONAL LOCKS, NY	3,745	2,789	200	400
N	UPPER MISSISSIPPI SMALL CRAFT LOCKS, NY	1,372	200	0	45
	STATE SUB-TOTALS	28,245	13,567	2,208	3,703
NORTH CAROLINA					
N	CAPE FEAR RIVER ACME TO FAYETTEVILLE, NC	821	420	110	110
FDP	NEUSE RIVER, NC	2,025	912	325	475
FDP	ROANOKE RIVER SOUTH BOSTON AND VICINITY, NC & VA	2,523	1,523	340	340
SP	WEST ONSLOW BEACH AND NEW RIVER INLET, NC	786	420	0	213
	STATE SUB-TOTALS	6,155	3,275	775	1,138
NORTH DAKOTA					
FDP	RED RIVER OF THE NORTH, ND & MN	7,410	5,890	761	761

CAPABILITIES FOR STUDIES UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
	STATE SUB-TOTALS	7,410	5,890	761	761
OHIO					
BE	ASHTABULA-LAKELINE TO ASHTABULA, OH	617	17	0	200
FDP	CENTRAL OHIO SURVEY, OH	3,315	2,515	120	280
N	CLEVELAND HARBOR, OH (PHASE I)	1,420	1,295	125	125
FDP	CUYAHOGA RIVER BASIN, OH	1,398	1,040	153	153
N	LAKE ERIE COAST, OH, MI, PA & NY	3,131	825	0	200
FDP	MIAMI RIVER, LITTLE MIAMI RIVER AND MILL CREEK BASIN, OH	4,179	3,599	195	300
FDP	SANDUSKY RIVER, OH	830	263	0	200
FDP	WESTERN LAKE ERIE SHORE, OH	1,213	720	0	200
	STATE SUB-TOTALS	16,113	10,274	593	1,658
OKLAHOMA					
FDP	CANADIAN RIVER & TRIBUTARIES, OK, TX, & NM	2,970	1,577	0	320
N	CENTRAL OKLAHOMA PROJECT, OK	2,490	1,820	0	200
FDP	POTEAU RIVER, OK & AR	1,535	1,426	109	109
	STATE SUB-TOTALS	6,995	4,823	109	629
OREGON					
N	COLUMBIA R COAL EXPORT, ASTORIA, OR	2,077	1,195	830	830
N	COQUILLE RIVER AND BAY, OR	558	390	148	148
FDP	KLAMATH RIVER BASIN, OR	3,150	438	0	986
N	ROGUE RIVER AT GOLD BEACH, OR	841	687	0	90
COM	WILLAMETTE RIVER BASIN, OR (COMPREHENSIVE STUDY)	2,823	1,231	120	425
	STATE SUB-TOTALS	9,459	3,941	1,098	2,479
PENNSYLVANIA					
FDP	ALLEGHENY RIVER BASIN, PA	675	200	65	200
N	DELAWARE RIVER DREDGE DISPOSAL STUDY, PA, NJ, & DE	1,355	1,090	0	175
FDP	KISKIMINETAS RIVER BASIN, PA	1,515	755	80	160
FDP	LEHIGH RIVER BASIN STUDY, PA	1,746	945	440	440
FDP	MONONGAHELA-YOUGHIOGHENY RIVER BASIN, PA, MD & WV	7,595	4,242	475	575
FDP	WEST BRANCH SUSQUEHANNA RIVER, WILLIAMSPORT & S. WILLIAMSPORT, PA	1,500	1,180	120	120
	STATE SUB-TOTALS	14,236	8,412	1,180	1,670
PUERTO RICO					
FDP	GUANAJIBO RIVER, PR	775	15	0	250
FDP	LA PLATA RIVER AND TRIBUTARIES, PR	910	608	212	212
FDP	RIO GRANDE DE LOIZA, PR	911	253	90	390
	STATE SUB-TOTALS	2,596	876	302	852
SOUTH CAROLINA					
FDP	GILLS CREEK, SC	1,799	847	452	452
FDP	LITTLE PEE DEE & PEE DEE RIVERS, SC & NC	852	103	300	400
FDP	LYNCHES RIVER, SC & NC	760	67	0	60
SP	MYRTLE BEACH, SC	418	205	168	168
	STATE SUB-TOTALS	3,829	1,222	920	1,080
SOUTH DAKOTA					
FDP	EASTERN SD AND UPPER BIG SIOUX RIVER, SD & IA	2,750	2,120	220	220
FDP	MISSOURI RIVER, SD, NE, ND & MT	7,300	4,862	745	900
FDP	WESTERN DAKOTAS REGION OF SD	2,090	1,134	150	400
	STATE SUB-TOTALS	12,140	8,116	1,115	1,520
TENNESSEE					
FDP	METROPOLITAN REGION OF NASHVILLE, TN	3,224	2,609	95	255
	STATE SUB-TOTALS	3,224	2,609	95	255

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CAPABILITIES FOR STUDIES UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1989 APPROVED BUDGET	FY 1990 CAPABILITY
TEXAS					
FDP	BRAZOS RIVER AND TRIBUTARIES, TX	7,990	6,066	250	400
FDP	BUFFALO BAYOU AND TRIBUTARIES TX	6,440	3,737	850	1,000
FDP	COLORADO RIVER AND TRIBUTARIES, TX	4,900	3,924	300	450
FDP	DICKINSON BAYOU, TX	1,010	150	0	270
N	GALVESTON BAY AREA NAVIGATION STUDY, TX	3,750	3,582	168	168
FDP	JOHNSON CREEK, ARLINGTON, TX	503	443	120	120
FDP	LITTLE CYPRESS CREEK, TX & LA	1,030	895	400	400
FDP	PINE ISLAND BAYOU WATERSHED, TX	990	500	0	225
SP	PLEASURE ISLAND AT PORT ARTHUR, TX	840	65	0	280
FDP	RED RIVER & TRIBUTARIES ABOVE DENISON DAM, TX, OK, & NM	4,030	923	0	550
FDP	SAN JACINTO RIVER AND TRIBUTARIES, TX	3,200	1,927	300	350
	STATE SUB-TOTALS	35,413	22,212	2,388	4,213
UTAH					
FDP	COLORADO RIVER & TRIBS., ABOVE LEE FERRY, UT, AZ, CO, NM & WY	3,100	1,439	373	700
FDP	JORDAN RIVER BASIN, UT	2,000	1,600	110	360
	STATE SUB-TOTALS	5,100	3,039	483	1,060
VIRGINIA					
FDP	CHOWAN RIVER, VA & NC	2,255	1,982	273	273
FDP	ROANOKE RIVER UPPER BASIN, VA	2,742	1,662	0	280
N	YORK AND PAMUNKEY RIVERS, VA	800	323	207	207
	STATE SUB-TOTALS	5,797	3,967	480	760
WASHINGTON					
FDP	CHEHALIS RIVER AND TRIBUTARIES, WA	2,692	2,362	0	250
FDP	MILL CREEK BASIN STUDY, WA	864	179	100	140
COM	PUGET SOUND AND ADJACENT WATERS, WA	7,460	5,545	350	720
N	SNOHOMISH RIVER (NAVIGATION), WA	938	506	200	300
	STATE SUB-TOTALS	11,954	8,592	650	1,410
WEST VIRGINIA					
FDP	GUYANDOTTE RIVER BASIN, VICINITY OF LOGAN AND MULLENS, WV	1,764	1,434	330	330
N	KANAWHA RIVER, WV	3,390	1,550	700	700
COM	KANAWHA BASIN COMPREHENSIVE (AUTHORIZATION REPORT), WV, VA & NC	3,814	3,226	275	275
	STATE SUB-TOTALS	8,968	6,210	1,305	1,305
WISCONSIN					
N	HARBORS BETWEEN KENOSHA AND KEWAUNEE, WI	1,795	759	0	100
FDP	ROCK RIVER ABOVE ROCKTON, WI & IL	854	207	0	200
FDP	WISCONSIN RIVER, PORTAGE, WI	850	792	50	50
	STATE SUB-TOTALS	3,499	1,758	50	350
	NATIONAL TOTALS	589,937	358,566	85,725	76,082
	NATIONAL TOTALS	589,937	358,566	85,725	76,082

STUDIES AVAILABLE FOR INITIATION

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ARIZONA					
FDR	GILA RIVER & TRIBUTARIES, NOGALES WASH, AZ & NM	200	0	200	200
	STATE SUB-TOTALS	200	0	200	200
ARKANSAS					
FDR	ARKANSAS RIVER - RUSSELLVILLE - MORRILTON, AR	155	0	0	155
	STATE SUB-TOTALS	155	0	0	155
COLORADO					
FDR	FOUNTAIN CREEK AND TRIBUTARIES, NORTH OF PUEBLO, CO	200	0	200	200
	STATE SUB-TOTALS	200	0	200	200
FLORIDA					
SP	BROWARD COUNTY, FL	50	0	0	50
	STATE SUB-TOTALS	50	0	0	50
HAWAII					
FDR	HARBORS & RIVERS IN HAWAII, WAILUKU-HONOLII HYDROPOWER, HI	180	0	0	180
FDR	HARBORS & RIVERS IN HAWAII, SOUTH KOHALA WATER SUPPLY, HI	150	0	150	150
FDR	KAILUA-KONA COMPREHENSIVE STUDY, HI	200	0	0	200
	STATE SUB-TOTALS	530	0	150	530
INDIANA					
FDR	FORT WAYNE METROPOLITAN AREA, IN	90	0	80	80
	STATE SUB-TOTALS	90	0	80	80
IOWA					
FDR	RIVER BASINS OF IOWA (MISSOURI RIVER & TRIBS), IA	590	0	0	500
	STATE SUB-TOTALS	500	0	0	500
KANSAS					
FDR	VERDIGRIS RIVER, KS & OK (CANEY RIVER)	100	0	100	100
	STATE SUB-TOTALS	100	0	100	100
LOUISIANA					
FDR	AMITE RIVER AND TRIBUTARIES, LA	350	0	350	350
FDR	LOUISIANA COASTAL AREA, SHORE & BARRIER ISLAND EROSION, LA	290	0	0	290
FDR	LOUISIANA COASTAL AREA - LAND LOSS AND MARSH CREATION, LA	400	0	400	400
FDR	LOUISIANA COASTAL AREA, WATER SUPPLY, LA	400	0	0	400
	STATE SUB-TOTALS	1,440	0	750	1,440
MINNESOTA					
FDR	MANKATO URBAN STUDY, MN	300	0	0	300
	STATE SUB-TOTALS	300	0	0	300
NEW YORK					
FDR	DELAWARE RIVER BASIN, NY, PA & NJ (ICE JAMS)	130	0	100	100
	STATE SUB-TOTALS	100	0	100	100
PUERTO RICO					
N	GUAYANES, LAS MAREAS AND GUAYANILLA HARBORS, PR	75	0	0	75

STUDIES AVAILABLE FOR INITIATION—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
SOUTH DAKOTA					
FDP	MISSOURI RIVER, YANKTON, SD TO THE MOUTH, IA, KS, MO, NE & SD	580	0	0	580
	STATE SUB-TOTALS	580	0	0	580
TEXAS					
FDP	LITTLE FOSSIL CREEK, TX	200	0	0	200
	STATE SUB-TOTALS	200	0	0	200
WISCONSIN					
FDP	LA CROSSE, WI (PHASE I)	566	0	0	175
	STATE SUB-TOTALS	566	0	0	175
	NATIONAL TOTALS	5,116	0	1,580	4,725
	NATIONAL TOTALS	5,116	0	1,580	4,725

CAPABILITIES FOR AE&D PROJECTS UNDERWAY

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ARKANSAS					
FC	MCKINNEY BAYOU, AR & TX	5,610	864	270	270
	STATE SUB-TOTALS	5,610	864	270	270
CALIFORNIA					
FC	COTTONWOOD CREEK, CA	750,000	11,875	4,000	4,000
FC	GOLETA AND VICINITY, CA	45,200	890	350	500
N	NOYO RIVER AND HARBOR (CHANNEL EXTENSION), CA	1,830	359	91	91
N	NOYO RIVER AND HARBOR (BREAKWATER), CA	6,240	589	184	184
	STATE SUB-TOTALS	803,270	13,713	4,625	4,775
ILLINOIS					
FC	HARTWELL DRAINAGE AND LEVEE DISTRICT, IL	11,600	1,040	0	160
FC	HILLVIEW D&LD, IL	11,500	931	280	469
FC	MEREDOSIA, ILLINOIS AND MEREDOSIA WILLOW CREEK & COON RUN D&LD, IL	11,200	732	50	340
FC	MEREDOSIA LAKE AND WILLOW CREEK D&L DIST, IL	9,300	590	50	390
FC	ROCK RIVER AGRICULTURAL LEVEES, IL	33,100	698	160	160
	STATE SUB-TOTALS	76,700	3,991	540	1,519
KANSAS					
FC	GREAT BEND, KS	39,400	0	0	200
	STATE SUB-TOTALS	39,400	0	0	200
KENTUCKY					
FC	FRANKFORT, KY (SOUTH FRANKFORT)	5,200	262	300	300

CAPABILITIES FOR AE&D PROJECTS UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
LOUISIANA					
FC	RED RIVER WATERWAY, SHREVEPORT, LA TO VICINITY OF INDEX, AR	200,000	718	0	490
FC	RED RIVER WATERWAY, LA, AR, OK & TX (INDEX, AR TO DENISON DAM, TX)	201,000	105	0	350
	STATE SUB-TOTALS	401,000	823	0	840
MICHIGAN					
N	CROSS VILLAGE HARBOR, MI	3,830	364	0	106
	STATE SUB-TOTALS	3,830	364	0	106
MINNESOTA					
FC	CHASKA, MN	17,600	1,159	300	300
FC	EAST GRAND FORKS, MN	12,300	658	200	200
	STATE SUB-TOTALS	29,900	1,817	500	500
MISSISSIPPI					
N	YAZOO RIVER, MS	198,000	1,955	100	375
	STATE SUB-TOTALS	198,000	1,955	100	375
MISSOURI					
FC	HANNIBAL, MO	675	311	150	150
	STATE SUB-TOTALS	675	311	150	150
NEW JERSEY					
N	DELAWARE RIVER IN THE VICINITY OF CAMDEN, NJ	5,750	170	50	50
N	GREAT EGG HARBOR INLET AND PECK BEACH, NJ	19,500	388	0	200
	STATE SUB-TOTALS	25,250	558	50	250
NEW MEXICO					
FC	ALAMOGORDO DIVERSION CHANNEL, NM	10,400	50	0	350
FC	SANTA FE RIVER AND ARROYO MASCARAS, NM	5,150	829	156	156
	STATE SUB-TOTALS	15,550	879	156	506
NORTH DAKOTA					
FC	SHEYENNE RIVER, ND	24,400	2,275	200	500
	STATE SUB-TOTALS	24,400	2,275	200	500
OHIO					
N	GENEVA-ON-THE-LAKE, OH	3,220	862	0	138
FC	RENO BEACH - HOWARD FARMS AREA, OH	4,530	354	170	170
	STATE SUB-TOTALS	7,750	1,216	170	308
OREGON					
FC	JOHNSON CREEK, OR	5,310	181	0	160
	STATE SUB-TOTALS	5,310	181	0	160
PENNSYLVANIA					
FC	FRANCIS E. WALTER DAM, PA (MODIFICATION)	74,500	2,329	1,120	1,120
FC	TAMAQUA, PA	8,420	1,125	725	725
	STATE SUB-TOTALS	82,920	3,454	1,845	1,845
TEXAS					
FC	CLEAR CREEK, TX	69,200	2,678	152	152
FC	MILLICAN LAKE, TX	318,000	3,743	200	550
N	NECHES RIV & TRIBS, SALTWATER BARRIER AT BEAUMONT, TX	32,700	1,455	0	200

CAPABILITIES FOR AE&D PROJECTS UNDERWAY—Continued

[Amounts in thousands]

(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
FC	TRINITY RIVER PROJECT, TX	1,090,000	14,002	238	238
	STATE SUB-TOTALS	1,509,900	21,878	590	1,140
WISCONSIN					
N	GREEN BAY HARBOR, WI	4,450	290	85	85
FC	STATE ROAD AND EBNER COULEES, WI	23,600	882	350	550
	STATE SUB-TOTALS	28,050	1,172	435	635
	NATIONAL TOTALS	3,262,695	55,713	9,035	14,379
	NATIONAL TOTALS	3,262,695	55,713	9,035	14,379

PROJECTS AVAILABLE FOR INITIATION OF AE&D

[Amounts in thousands]

(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
FLORIDA					
N	TAMPA HARBOR BRANCH CHANNELS, FL	47,000	0	100	100
	STATE SUB-TOTALS	47,000	0	100	100
MISSOURI					
FC	MERAMEC RIVER BASIN, MO	1,400	600	0	600
	STATE SUB-TOTALS	1,400	600	0	600
PUERTO RICO					
BE	SAN JUAN BEACH, PR	960	0	0	50
	STATE SUB-TOTALS	960	0	0	50
TEXAS					
HP	TOWN BLUFF HYDROPOWER, TX	17,400	0	400	400
	STATE SUB-TOTALS	17,400	0	400	400
	NATIONAL TOTALS	66,760	600	500	1,150
	NATIONAL TOTALS	66,760	600	500	1,150

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ALABAMA					
N	FRANKLIN FERRY BRIDGE, AL	4,100	750	0	1,800
N	TENNESSEE TOMBIGBEE WATERWAY, AL & MS	1,820,000	1,518,225	90,000	90,000
	STATE SUB-TOTALS	1,824,100	1,518,975	90,000	91,800
ALASKA					
FC	CHENA RIVER LAKES, AK	263,000	181,309	8,000	10,000
N	KAKE HARBOR, AK	11,100	781	50	50
	STATE SUB-TOTALS	274,100	182,090	8,050	10,050
ARIZONA					
FC	INDIAN BEND WASH, AZ	34,400	30,596	3,804	3,804
FC	PHOENIX AND VICINITY, AZ (STAGE 2 & REMAINING WORK)	288,000	25,917	8,500	8,500
	STATE SUB-TOTALS	322,400	56,513	12,304	12,304
ARKANSAS					
N	MCCLELLAN-KERR ARK RIVER NAVIGATION SYSTEM LOCKS AND DAMS, AR & OK	543,900	536,496	5,570	5,570
N	OUACHITA & BLACK RIVERS, AR & LA	257,000	193,818	9,200	9,200
	STATE SUB-TOTALS	800,900	730,314	14,770	14,770
CALIFORNIA					
FC	CORTE MADERA CREEK, CA	10,500	7,000	0	100
FC	CUCAMONGA CREEK, CA	97,500	92,097	2,900	2,900
FC	DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA	322,000	256,087	12,000	14,200
FC	MERCED COUNTY STREAMS, CA	72,700	10,350	6,000	6,000
MP	NEW MELONES LAKE, CA	376,000	329,689	7,300	7,300
FC	SACRAMENTO RIVER & MAJOR AND MINOR TRIBUTARIES, CA	11,930	11,363	200	200
FC	SACRAMENTO RIVER FLOOD CONTROL PROJECT, CA	10,400	0	0	500
N	SAN FRANCISCO BAY TO STOCKTON, CA	189,000	14,983	8,000	11,000
FC	SAN JACINTO RIVER LEV & BAUTISTA CRK CHANNEL, CA	13,600	7,027	6,573	6,573
BE	SURFSIDE-SUNSET & NEWPORT BEACH, CA	33,830	6,214	3,800	3,800
FC	WALNUT CREEK, CA	72,100	36,991	4,700	4,700
FC	WILDCAT & SAN PABLO CREEKS, CA	15,400	1,110	320	320
	STATE SUB-TOTALS	1,224,900	772,911	51,793	57,593
COLORADO					
FC	CHATFIELD LAKE, CO	96,300	88,535	2,000	4,000
	STATE SUB-TOTALS	96,300	88,535	2,000	4,000
CONNECTICUT					
FC	NEW LONDON HURRICANE BARRIER, CT	7,770	6,945	825	825
	STATE SUB-TOTALS	7,770	6,945	825	825
DELAWARE					
FC	DEL COAST BEACH EROSION CONTROL & HURRICANE PROT, DE	119,000	1,479	775	775
N	INLAND WATERWAY, DELAWARE RIVER-CHESAPEAKE BAY(C&D) CANALS, DE & MD	137,000	99,852	0	390
	STATE SUB-TOTALS	256,000	101,331	775	1,165
FLORIDA					
BE	BROWARD COUNTY (REIMB), FL	13,900	6,253	4,600	4,600
N	CANAVERAL HARBOR, FL	12,500	6,162	0	200
FC	CENTRAL & SOUTHERN FLORIDA, FL	819,000	269,056	11,100	11,100
FC	DADE COUNTY, FL	50,400	33,644	300	300
BE	DUVAL COUNTY, FL	12,300	5,969	1,500	1,500
FC	FOUR RIVER BASINS, FL	198,000	69,071	3,000	3,000
BE	PALM BEACH CO, MARTIN-LAKE WORTH, SO. LK WORTH-BROWARD (REIMB), FL	7,000	1,871	2,300	2,300
BE	PINELLAS COUNTY, FL	13,400	2,540	700	700
N	TAMPA HARBOR-MAIN CHANNEL, FL	177,000	146,575	17,000	17,000
	STATE SUB-TOTALS	1,303,500	541,141	40,500	40,700

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
GEORGIA					
HP	RICHARD B. RUSSELL DAM AND LAKE, GA & SC	520,000	351,821	51,500	51,500
	STATE SUB-TOTALS	520,000	351,821	51,500	51,500
HAWAII					
N	BARBERS POINT HARBOR, OAHU, HI	57,900	35,223	18,000	18,000
FC	KAHOMA STREAM, HI	14,200	3,729	5,000	5,000
	STATE SUB-TOTALS	72,100	38,952	23,000	23,000
IDAHO					
HP	DWORSHAK DAM AND RESERVOIR, ID	328,000	322,174	4,000	4,000
	STATE SUB-TOTALS	328,000	322,174	4,000	4,000
ILLINOIS					
FC	EAST ST. LOUIS AND VICINITY, IL	37,400	8,518	2,600	2,600
FC	KASKASKIA ISLAND DRAINAGE AND LEVEE DISTRICT, IL	15,830	4,243	3,500	8,000
N	KASKASKIA RIVER NAVIGATION, IL	155,000	123,891	5,500	5,500
N	LOCK AND DAM NO 26, MISSISSIPPI RIVER, ALTON, IL & MO	869,000	214,257	53,800	53,800
FC	MCGEE CREEK DRAINAGE AND LEVEE DISTRICT, IL	25,500	17,717	5,600	5,600
FC	MILAN, IL	14,700	6,708	4,830	4,830
FC	ROCKFORD, IL	9,770	6,829	1,500	1,500
N	SMITHLAND LOCKS AND DAM, IL, IN & KY	276,000	266,956	820	820
FC	WOOD RIVER DRAINAGE AND LEVEE DISTRICT, IL	18,600	15,590	1,500	1,500
	STATE SUB-TOTALS	1,421,770	664,709	79,650	84,150
INDIANA					
FC	EVANSVILLE, IN	48,400	25,950	2,100	2,100
	STATE SUB-TOTALS	48,400	25,950	2,100	2,100
IOWA					
FC	BETTENDORF, IA	14,500	3,767	3,800	3,800
FC	CORALVILLE LAKE, IA	28,044	21,207	3,000	3,000
FC	DAVENPORT, IA	30,000	2,990	1,200	1,200
FC	LITTLE SIOUX RIVER, IA	19,020	15,733	300	300
FC	MISSOURI RIVER LEVEE SYSTEM, IA, NE, KS & MO	207,000	85,478	1,100	1,100
FC	SAYLORVILLE LAKE, IA	104,200	98,382	1,860	1,860
FC	WATERLOO, IA	52,700	46,200	2,000	2,000
	STATE SUB-TOTALS	455,464	273,757	13,260	13,260
KANSAS					
FC	EL DORADO LAKE, KS	90,300	81,109	6,800	6,800
	STATE SUB-TOTALS	90,300	81,109	6,800	6,800
KENTUCKY					
FC	BIG SOUTH FORK NATIONAL RIVER & RECREATION AREA, KY & TN	103,522	60,854	10,500	10,500
FC	CAVE RUN LAKE, KY	80,500	71,551	1,360	1,360
HP	LAUREL RIVER LAKE, KY	60,000	56,138	700	700
FC	PAINTSVILLE LAKE, KY	60,300	51,387	3,300	3,300
FC	SOUTHWESTERN JEFFERSON COUNTY, KY	67,000	35,029	6,000	6,000
FC	TAYLORSVILLE LAKE, KY	96,200	79,962	4,400	4,400
	STATE SUB-TOTALS	467,522	354,921	26,260	26,260
LOUISIANA					
FC	BAYOU BODCAU AND TRIBUTARIES, LA	24,100	4,907	400	400
FC	LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION)	460,000	182,364	16,800	16,800
FC	LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION)	65,500	26,402	5,700	5,700
N	LELAND BOWMAN LOCK, LA (REPLACEMENT)	32,200	21,875	10,325	10,325
N	MISSISSIPPI RIVER, BATON ROUGE TO THE GULF OF MEXICO, LA	190,000	15,280	800	800

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
N	MISSISSIPPI RIVER - GULF OUTLET, LA	483,000	78,135	500	500
FC	MORGAN CITY AND VICINITY, LA (HURRICANE PROTECTION)	25,800	1,354	280	280
FC	NEW ORLEANS TO VENICE, LA (HURRICANE PROTECTION)	138,700	48,639	4,400	4,400
N	RED RIVER WATERWAY - MISSISSIPPI RIVER TO SHREVEPORT, LA	1,461,000	415,486	63,700	83,940
	STATE SUB-TOTALS	2,896,300	754,442	102,905	123,145
MAINE					
N	JONESPORT HARBOR, ME	8,500	240	25	25
	STATE SUB-TOTALS	8,500	240	25	25
MARYLAND					
N	BALTIMORE HARBOR & CHANNELS, MD & VA (50 FT PROJECT)	271,000	2,750	1,200	1,200
	STATE SUB-TOTALS	271,000	2,750	1,200	1,200
MICHIGAN					
FC	SAGINAW RIVER, MI	65,800	1,685	0	1,165
	STATE SUB-TOTALS	65,800	1,685	0	1,165
MINNESOTA					
FC	BIG STONE LAKE, WHETSTONE RIVER, MN & SD	13,300	10,315	1,750	1,750
FC	MANKATO & NORTH MANKATO, MN	104,000	49,600	7,200	7,200
FC	WINONA, MN	30,700	25,447	2,600	2,600
	STATE SUB-TOTALS	148,000	85,362	11,550	11,550
MISSISSIPPI					
FC	TOMBIGBEE RIVER AND TRIBUTARIES, MS & AL	140,000	12,714	1,400	1,400
	STATE SUB-TOTALS	140,000	12,714	1,400	1,400
MISSOURI					
MP	CLARENCE CANNON DAM AND MARK TWAIN LAKE, MO	308,100	286,187	11,630	11,630
MP	HARRY S. TRUMAN DAM AND RESERVOIR, MO	543,000	498,342	8,000	9,800
FC	LITTLE BLUE RIVER LAKES, MO	143,000	98,808	9,900	12,000
FC	LITTLE BLUE RIVER CHANNEL, MO	27,300	21,725	3,700	3,700
FC	LONG BRANCH LAKE, MO	20,100	17,811	300	300
N	MISS RIVER BTWN THE OHIO & MO RIVERS (REG WORKS), MO & IL	231,000	99,746	2,200	3,700
	STATE SUB-TOTALS	1,272,500	1,022,619	35,730	41,130
MONTANA					
FC	GREAT FALLS, MT	11,300	7,932	2,000	2,000
MP	LIBBY ADDITIONAL UNITS, MT	52,800	41,557	2,600	2,600
	STATE SUB-TOTALS	64,100	49,489	4,600	4,600
NEBRASKA					
FC	PAPILLION CREEK AND TRIBUTARIES LAKES, NE	49,400	38,178	4,400	4,400
	STATE SUB-TOTALS	49,400	38,178	4,400	4,400
NEW JERSEY					
FC	ELIZABETH RIVER FLOOD CONTROL PROJECT, NJ	54,600	45,157	4,800	4,800
	STATE SUB-TOTALS	54,600	45,157	4,800	4,800

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1988 APPROVED BUDGET	FY 1988 CAPABILITY
NEW YORK					
BE	EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY, NY	26,800	12,750	3,200	3,200
N	IRONDEQUOIT BAY, NY	4,510	865	110	110
N	NY HARBOR COLLECTION & REMOVAL OF DRIFT PROJECT, NY & NJ	61,200	11,534	1,300	5,100
	STATE SUB-TOTALS	92,510	25,149	4,610	8,410
NORTH CAROLINA					
N	AIWW-REPLACEMENT OF FEDERAL HIGHWAY BRIDGES, NC	44,000	10,497	1,500	1,500
FC	B. EVERETT JORDAN DAM AND LAKE, NC	138,000	94,208	8,200	10,000
FC	FALLS LAKE, NC	167,000	127,171	4,300	4,300
FC	RANDLEMAN LAKE, NC	76,000	3,921	2,700	2,700
	STATE SUB-TOTALS	425,000	235,797	16,700	18,500
NORTH DAKOTA					
FC	LAKE DARLING, SOURIS RIVER, ND	85,200	1,800	1,000	1,000
	STATE SUB-TOTALS	85,200	1,800	1,000	1,000
OHIO					
FC	MILL CREEK, OH	169,000	18,248	10,000	10,000
FC	MUSKINGUM RIVER LAKES, OH (DAM SAFETY ASSURANCE)	98,000	4,630	3,200	3,200
FC	NEWARK, OH	11,100	5,049	300	300
FC	POINT PLACE, OH	9,560	4,299	2,500	2,500
	STATE SUB-TOTALS	287,660	32,226	16,000	16,000
OKLAHOMA					
FC	ARCADIA LAKE, OK	91,400	55,435	8,300	8,300
FC	SKIATOOK LAKE, OK	113,000	91,865	11,000	11,000
	STATE SUB-TOTALS	204,400	147,300	19,300	19,300
OREGON					
MP	BONNEVILLE SECOND POWERHOUSE, OR & WA	640,000	600,013	18,500	18,500
MP	JOHN DAY LOCK AND DAM, LAKE UMATILLA, OR & WA	519,000	484,320	4,500	13,000
FC	LOWER COLUMBIA RIVER BASIN BANK PROTECTION, OR & WA	26,400	14,725	2,000	2,000
N	SIUSLAW RIVER & BAR, OR	36,400	475	0	13,600
FC	WILLAMETTE RIVER BASIN BANK PROTECTION, OR	33,400	23,197	700	700
FC	WILLOW CREEK LAKE HEPPNER, OR	34,760	31,816	2,988	2,988
	STATE SUB-TOTALS	1,289,960	1,154,546	28,688	51,588
PENNSYLVANIA					
BE	PRESQUE ISLE, PA	15,346	9,646	1,240	1,240
FC	WYOMING VALLEY, PA (REMEDIAL WORK) (DEF COR)	29,400	16,415	2,800	8,800
	STATE SUB-TOTALS	44,746	26,061	4,040	10,040
PUERTO RICO					
N	PONCE HARBOR, PR	8,550	245	25	25
FC	PORTUGUES AND BUCANA RIVERS, PR	292,000	85,276	25,000	25,000
	STATE SUB-TOTALS	300,550	85,521	25,025	25,025
SOUTH CAROLINA					
N	COOPER RIVER, CHARLESTON HARBOR, SC	168,000	155,030	9,800	9,800
N	LITTLE RIVER INLET, SC & NC	18,500	16,739	1,761	1,761
	STATE SUB-TOTALS	186,500	171,769	11,561	11,561

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
TEXAS					
FC	ARKANSAS-RED RIVER BASINS CHLORIDE CONTROL, TX (AREA VIII)	50,700	44,171	3,329	3,329
N	CORPUS CHRISTI SHIP CHANNEL, TX (1968 ACT)	92,000	26,875	9,200	9,200
BE	CORPUS CHRISTI BEACH, TX (RESTORATION PROJECT)	2,550	1,555	995	995
FC	EL PASO, TX	66,500	42,179	4,550	4,550
N	FREEPORT HARBOR, TX	51,000	493	75	75
N	FREEPORT HARBOR, TX (RELOCATION OF NORTH JETTY)	12,900	3,775	3,350	3,350
FC	GRAPEVINE LAKE, TX (MAJOR REHABILITATION)	15,700	0	0	6,000
FC	HIGHLAND BAYOU, TX	21,900	12,138	100	100
FC	JOE POOL LAKE (FORMERLY LAKEVIEW LAKE), TX	196,000	125,088	22,800	25,800
FC	RAY ROBERTS LAKE, TX	292,000	65,395	42,000	55,000
FC	SAN ANTONIO CHANNEL IMPROVEMENT, TX	74,200	37,718	6,500	6,500
FC	SAN GABRIEL RIVER, TX	150,600	101,402	250	250
FC	TAYLORS BAYOU, TX	71,200	4,543	2,600	3,100
FC	VINCE AND LITTLE VINCE BAYOUS, TX	20,900	8,368	3,000	3,000
	STATE SUB-TOTALS	1,118,150	473,700	98,749	121,249
VIRGINIA					
BE	VIRGINIA BEACH, VA (1962 MODIFICATION) (REIMB)	5,500	3,510	430	430
FC	VIRGINIA BEACH STREAMS, CANAL NO TWO, VA	3,800	2,589	1,211	1,211
	STATE SUB-TOTALS	9,300	6,099	1,641	1,641
WASHINGTON					
HP	CHIEF JOSEPH DAM ADDITIONAL UNITS, WA	366,000	322,434	16,700	18,900
HP	LOWER SNAKE RIVER FISH AND WILDLIFE COMPENSATION, WA, OR & ID	177,000	72,650	18,700	23,000
	STATE SUB-TOTALS	543,000	395,084	35,400	41,900
WEST VIRGINIA					
FC	BEECH FORK LAKE, WV	47,300	38,292	2,000	2,000
FC	BURNSVILLE LAKE, WV	55,400	54,345	750	750
FC	LEVISA & TUG FORKS OF BIG SANDY RVR & CUMBERLAND RVR, WV, VA & KY	191,000	30,400	600	600
FC	R D BAILEY LAKE, WV	195,000	191,322	2,300	2,300
FC	STONEWALL JACKSON LAKE, WV	205,000	42,710	26,000	26,000
	STATE SUB-TOTALS	693,700	357,069	31,650	31,650
	NATIONAL TOTALS	10,772,432	11,276,905	888,517	995,512
	NATIONAL TOTALS	10,772,432	11,276,905	888,517	995,512

PROJECTS AVAILABLE FOR INITIATION OF CONSTRUCTION

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ALASKA					
N	KAKE HARBOR, AK	11,100	741	0	1/
	STATE SUB-TOTAL	11,100	741	0	
CALIFORNIA					
N	BODEGA BAY, CA	1,190	585	500	500
FC	FAIRFIELD VICINITY STREAMS, CA	19,600	687	320	320
FC	SAN LUIS REY RIVER, CA	30,600	1,854	900	900
	STATE SUB-TOTAL	51,390	3,126	1,720	1,720
MAINE					
N	JONESPORT HARBOR, ME	8,500	240	25	1/
	STATE SUB-TOTAL	8,500	240	25	
MARYLAND & VIRGINIA					
N	BALTIMORE HARBOR, MD & VA	271,000	2,750	1,200	1/
	STATE SUB-TOTAL	271,000	2,750	1,200	

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
MINNESOTA					
FC	BASSETT CREEK, MN	21,600	1,625	6,000	6,000
	STATE SUB-TOTALS	21,600	1,625	6,000	6,000
NEW YORK					
FC	ELLICOTT CREEK, NY	14,550	1,819	600	600
	STATE SUB-TOTALS	14,550	1,819	600	600
PUERTO RICO					
N	PONCE HARBOR, PR	8,500	245	25	1/
	STATE SUB-TOTAL	8,500	245	25	
TEXAS					
N	FREEPORT HARBOR, TX (DEEPENING)	51,000	493	75	1/
	STATE SUB-TOTAL	51,000	493	75	
	NATIONAL TOTAL	437,640	11,039	9,645	8,320

1/ One of five projects which are being kept engineeringly active in FY 1984. A capability is dependent upon willingness of local sponsors to enter into innovative financing agreement and, in the case of deep-draft navigation projects, enactment of cost recovery legislation. The funds included in the FY 1984 budget for there projects are also listed under the ongoing construction program and are for the continuation of E&D.

CAPABILITIES FOR MAJOR REHABILITATION AND DAM SAFETY ASSURANCE PROJECTS UNDERWAY

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
GEORGIA					
MP	HARTWELL LAKE UPPER AND LOWER DIVERSION DAMS, GA & SC (MAJ R&B)	7,800	5,200	2,600	2,600
MP	WALTER F. GEORGE LOCK AND DAM (MAJOR REHAB), GA & AL	29,300	11,175	10,000	10,000
	STATE SUB-TOTALS	37,100	16,375	12,600	12,600
HAWAII					
N	KAHULUI HARBOR, MAUI, HI (REHAB)	2,924	2,264	660	660
	STATE SUB-TOTALS	2,924	2,264	660	660
ILLINOIS					
N	ILLINOIS WATERWAY, LOCKPORT L&D, IL (REHAB)	19,000	500	9,000	9,000
N	LOCKS AND DAM 53, IL & KY (REHAB)	6,070	4,357	500	500
N	LOCKS AND DAM 52, IL & KY (REHAB)	9,150	8,101	1,029	1,029
	STATE SUB-TOTALS	34,220	12,958	10,529	10,529
OHIO					
FC	MUSKINGUM RIVER LAKES, OH (REHAB)	45,200	15,570	1,300	1,300
	STATE SUB-TOTALS	45,200	15,570	1,300	1,300
PENNSYLVANIA					
N	EMSWORTH LOCKS AND DAM, OHIO RIVER, PA (MAJOR REHAB)	36,500	25,715	7,400	7,400
FC	KINZUA DAM AND ALLEGHENY RESERVOIR, PA & NY (MAJOR REHAB)	6,000	1,085	3,200	3,200
	STATE SUB-TOTALS	42,500	26,800	10,600	10,600
WASHINGTON					
N	LAKE WASHINGTON SHIP CANAL, WA (REHAB)	8,620	4,900	3,720	3,720
FC	MILL CREEK LAKE, WA (REHAB)	15,800	13,026	1,500	1,500
	STATE SUB-TOTALS	24,420	17,926	5,220	5,220
	NATIONAL TOTALS	186,364	91,893	40,909	40,909
	NATIONAL TOTALS	186,364	91,893	40,909	40,909

MAJOR REHABILITATION AND DAM SAFETY ASSURANCE PROJECTS AVAILABLE FOR INITIATION

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
CALIFORNIA					
FC	LACDA LA RIVER CHANNEL, CA (REHAB)	46,800	0	5,000	5,000
	STATE SUB-TOTALS	46,800	0	5,000	5,000
ILLINOIS					
N	ILLINOIS WATERWAY, BRANDON ROAD L&D, IL (REHAB)	12,600	0	6,000	6,000
	STATE SUB-TOTALS	12,600	0	6,000	6,000
PENNSYLVANIA					
N	MONTGOMERY LOCKS AND DAM, OHIO RIVER, PA (MAJOR REHAB)	22,100	0	3,700	3,700
	STATE SUB-TOTALS	22,100	0	3,700	3,700
	NATIONAL TOTALS	81,500	0	14,700	14,700
	NATIONAL TOTALS	81,500	0	14,700	14,700

CAPABILITIES FOR CONTINUING CP&E

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ALABAMA					
N	MOBILE HARBOR DEEPENING, AL	4850	1656	700	900
	STATE SUB-TOTALS	4850	1656	700	900
ARIZONA					
FC	HOLBROOK, LITTLE COLORADO RIVER, AZ	680	325	0	355
	STATE SUB-TOTALS	680	325	0	355
CALIFORNIA					
FC	CACHE CREEK, CA (CP&E)	28400	70	300	600
N	FISHERMAN'S WHARF AREA, SAN FRANCISCO HARBOR, CA	600	175	0	375
FC	REDBANK AND FANCHER CREEKS, CA (CP&E)	75200	670	1500	1500
N	SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, CA	3500	850	0	1600
FC	SANTA ANA RIVER, CA (CP&E)	1300000	3315	2300	2900
	STATE SUB-TOTALS	1407700	5080	4100	6975
COLORADO					
FC	ARKANSAS RIVER AND TRIBS ABOVE JOHN MARTIN DAM (FOUNTAIN CREEK), CO	1450	1150	300	300
	STATE SUB-TOTALS	1450	1150	300	300
GEORGIA					
N	SAVANNAH HARBOR WIDENING, GA	800	375	250	425
	STATE SUB-TOTALS	800	375	250	425
LOUISIANA					
N	MISSISSIPPI RIVER - GULF OUTLET (ENLARGEMENT), LA (CP&E)	7600	3545	600	2100
	STATE SUB-TOTALS	7600	3545	600	2100

CAPABILITIES FOR CONTINUING CP&E—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
MASSACHUSETTS					
FC	QUINCY COASTAL STREAMS, TOWN BROOK, MA	600	300	200	300
	STATE SUB-TOTALS	600	300	200	300
NEW HAMPSHIRE					
N	PORTSMOUTH HARBOR & PISCATAQUA RIVER, NH & ME	600	300	0	300
	STATE SUB-TOTALS	600	300	0	300
NEW JERSEY					
FC	RAHWAY RIV BASIN, RAHWAY & VAN WINKLES BR-SPRINGFIELD, NJ (CP&E)	980	535	340	340
FC	RAHWAY RIVER, ROBINSON S BRANCH, CITY OF RAHWAY, NJ (CP&E)	650	300	150	275
	STATE SUB-TOTALS	1630	835	490	615
NEW YORK					
FC	MAMARONECK AND SHELDRAKE RIVERS, VILLAGE OF MAMARONECK, NY (CP&E)	3340	555	250	740
	STATE SUB-TOTALS	3340	555	250	740
OHIO					
FC	CENTRAL OHIO SURVEY AT NELSONVILLE, OH	795	175	0	200
FC	CENTRAL OHIO SURVEY AT LOGAN, OH (CP&E)	690	375	315	315
FC	MUSKINGUM RIVER BASIN SURVEY AT MANSFIELD, OH (CP&E)	630	425	205	205
FC	MUSKINGUM RIVER BASIN SURVEY AT KILLBUCK, OH (CP&E)	895	250	100	100
	STATE SUB-TOTALS	3010	1225	620	820
OREGON					
N	BONNEVILLE NAVIGATION LOCK, OR & WA	7600	4352	0	2400
MP	MCNARY LOCK AND DAM (SECOND POWERHOUSE), OR & WA (CP&E)	4650	3150	1500	1500
	STATE SUB-TOTALS	12250	7502	1500	3900
PENNSYLVANIA					
FC	SUSQUEHANNA BASIN AT HARRISBURG, PA (CP&E)	2900	948	300	900
	STATE SUB-TOTALS	2900	948	300	900
TEXAS					
FC	COLORADO RIVER & TRIBS, BOGGY CR AT AUSTIN, TX	720	620	100	100
FC	LAKE WICHITA, HOLLIDAY CREEK AT WICHITA FALLS, TX	905	355	200	425
FC	UPPER WHITE OAK BAYOU & TRIBS, VICINITY OF HOUSTON, TX	3225	814	400	800
	STATE SUB-TOTALS	4850	1789	700	1325
VIRGINIA					
N	NORFOLK HARBOR (DEEPENING), VA (CP&E)	12400	5600	2000	3800
	STATE SUB-TOTALS	12400	5600	2000	3800
WASHINGTON					
N	BLAIR AND SITCUM WATERWAYS, WA	980	500	0	280
	STATE SUB-TOTALS	980	500	0	280
	NATIONAL TOTALS	1465640	31685	12010	24035
	NATIONAL TOTALS	1465640	31685	12010	24035

CAPABILITIES FOR INITIATION OF CP&E

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
ALABAMA					
FC	THREE MILE CREEK, AL	900	0	0	600
FC	VILLAGE CREEK, AL	495	0	0	215
	STATE SUB-TOTALS	1,395	0	0	815
ARKANSAS					
MP	ARK RIV & TRIBS, HYDROPOWER AND OTHER PURPOSES (L&D 9), AR	1,450	0	0	300
MP	ARK RIV & TRIBS, HYDROPOWER AND OTHER PURPOSES (L&D 13), AR	1,700	0	0	350
MP	ARK RIV & TRIBS, HYDROPOWER AND OTHER (TOAD SUCK FERRY L&D 8), AR	1,000	0	0	250
MP	ARK RIV & TRIBS, HYDROPOWER AND OTHER PURPOSES (MURRAY L&D 7), AR	1,470	0	0	600
FC	FOURCHE BAYOU IN THE VICINITY OF LITTLE ROCK, AR	2,000	0	700	700
	STATE SUB-TOTALS	7,620	0	700	2,200
CALIFORNIA					
N	RICHMOND HARBOR (DEEPENING), CA	600	0	0	400
	STATE SUB-TOTALS	600	0	0	400
COLORADO					
FC	WESTERLY CREEK, CO	450	0	0	210
	STATE SUB-TOTALS	450	0	0	210
GEORGIA					
FC	LAKE LANIER REREGULATION DAM, GA	1,900	0	700	700
FC	OATES CREEK, SAVANNAH RIVER BASIN, GA	695	0	200	200
	STATE SUB-TOTALS	2,595	0	900	900
GUAM					
FDP	AGANA RIVER, GUAM	420	0	150	150
	STATE SUB-TOTALS	420	0	150	150
ILLINOIS					
N	ST. LOUIS HARBOR, IL & MO (CP&E)	1,500	0	0	600
	STATE SUB-TOTALS	1,500	0	0	600
IOWA					
FC	GREEN BAY LEVEE & DRAINAGE DISTRICT, IA	450	0	0	200
FC	LOVES PARK LPP, IA	1,450	0	0	200
FC	PERRY CREEK, IA	370	0	200	200
	STATE SUB-TOTALS	2,290	0	200	600
MARYLAND					
BE	ATLANTIC COAST OF MARYLAND, MD	1,000	0	0	1,050
	STATE SUB-TOTALS	1,000	0	0	1,050
MINNESOTA					
FC	REDWOOD RIVER AT MARSHALL, MN	290	0	150	150
	STATE SUB-TOTALS	290	0	150	150
MISSOURI					
FC	BRUSH CREEK, KANSAS CITY, MO	550	0	0	250
FC	CAPE GIRARDEAU - JACKSON AREA, MO (CP&E)	2,000	0	0	500
FC	MALINE CREEK, MO (CP&E)	3,200	0	0	500
	STATE SUB-TOTALS	5,750	0	0	1,250

CAPABILITIES FOR INITIATION OF CP&E—Continued

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1984 APPROVED BUDGET	FY 1984 CAPABILITY
NEW MEXICO					
FC	RIO GRANDE & TRIBS (MIDDLE RIO GRANDE BERNALILLO TO BELEN), NM	2,200	0	0	1,000
	STATE SUB-TOTALS	2,200	0	0	1,000
OHIO					
FC	CENTRAL OHIO SURVEY AT NORTH CHILLICOTHE, OH	960	0	0	240
FC	MIAMI RIVER BASIN OF PLEASANT RUN, VICINITY OF FAIRFIELD, OH	520	0	0	200
FC	MIAMI RIVER BASIN AT WEST CARROLLTON, OH	300	0	0	125
	STATE SUB-TOTALS	1,780	0	0	565
OKLAHOMA					
HP	ARK RIV & TRIBS, HYDROPOWER AND OTHER PURPOSES (ND MAYO L&D 14), OK	1,750	0	0	500
FC	PARKER LAKE, OK	1,560	0	0	200
	STATE SUB-TOTALS	3,310	0	0	700
SOUTH DAKOTA					
HP	GREGORY COUNTY HYDROELECTRIC PUMPED STORAGE FACILITY, SD	5,500	0	2,000	2,000
	STATE SUB-TOTALS	5,500	0	2,000	2,000
TEXAS					
N	BRAZOS ISLAND HARBOR (42 FOOT PROJECT), TX	720	0	0	200
FC	LOWER RIO GRANDE BASIN, TX	1,120	0	0	600
	STATE SUB-TOTALS	1,840	0	0	800
VIRGIN ISLANDS					
N	VIRGIN ISLANDS (CROWN BAY), VI	160	0	0	50
	STATE SUB-TOTALS	160	0	0	50
	NATIONAL TOTALS	39,450	0	4,100	13,440
	NATIONAL TOTALS	39,450	0	4,100	13,440

NATIONAL WATERWAYS STUDY

Question. Mr. Gianelli, this committee directed that the national waterways study, which was initiated in 1976, be transmitted to Congress by March 1, 1983, so that we could carefully examine the needs for waterway improvements. Do you foresee any problem with the study being submitted to the Congress as directed?

Answer. We have been unable to avoid a little delay. The Corps will not have printed copies of the report available until late April. The Corps has been directed not to wait for printed copies before forwarding the report to the Secretary of the Army. We expect the Chief of Engineers to submit his report—in typed form—by mid-March. He has been asked to furnish a copy to your committee at the same time. The formal submission of the report to the Congress will be made as soon as the executive branch clearance process is completed.

CHICAGO SANITARY AND SHIP CANAL

Question. What is the current status of negotiation relative to the operation and maintenance of the Illinois Waterway, particularly the Chicago sanitary and ship canal portions? What action has been taken by the Chief of Engineers to resolve the issue involved?

Answer. Our Rock Island District engineer and his staff have met several times with the Metropolitan Sanitary District of Greater Chicago in an attempt to reach agreement regarding the Corps' and MSD's operation and maintenance responsibilities consistent with carrying out the purposes provided for in section 107 of Public Law 97-88 and the subsequent committee report language. While these meetings have not resulted in total agreement as to all issues, progress to date provides a sound basis of continuing the negotiations. The Rock Island District engineer has briefed my staff on his negotiating principles and objectives and he has outlined three primary unresolved issues which involve ownership of facilities, agreement approval authorities, and disposition of other control structures.

The MSD has been informed that $53,000 has been set aside to implement section 107 of Public Law 97-88 and the North Central Division Engineer has written to MSD informing them that, in his opinion, additional legislative authorization would be necessary before the Corps of Engineers could assume only O&M responsibility for the Chicago River control structure and lock because these facilities are outside the purview—that is, geographical limits—of Public Law 97-88.

MOUNT ST. HELENS

Question. Can you tell the committee what remains to be done before you can propose a permanent solution to the Spirit Lake problem? When do you plan to make your proposal known? Is the permanent solution at Spirit Lake separate from the larger issue of how to correct deficiencies which resulted from the Mount St. Helens disaster?

Answer. Selection of a permanent outlet plan for Spirit Lake is dependent on further exploration and study of the debris dam to determine a safe lake water surface elevation that would pose no threat to downstream areas. These explorations and study are now underway. The major alternatives for a permanent solution include an open channel, a buried conduit passing through the debris dam, of a tunnel to the Toutle River, or adjacent drainage. Ongoing planning and engineering studies will result in a recommendation for a permanent outlet solution as part of the Presidentially requested comprehensive plan. This plan is to be completed and submitted to the President in November 1983.

Question. With regard to Mount St. Helens, what work do you plan to undertake in 1983 and 1984 for the Cowlitz and Toutle Rivers in Washington?

Answer. In December 1982 we initiated contracts to raise levees at Longview, Kelso, Lexington, and Castle Rock locations. Dredging of the lower Toutle River, at LT-1, was initiated in January 1983 to further alleviate the flood threat to the upper Cowlitz River area. We plan to remove some 3 million cubic yards of material by the end of April. After the peak flow periods for this water-year have passed, the then existing channel conditions will be evaluated and sediment projections further refined. Alternative measures will then be developed to maintain adequate flood protection along the Cowlitz River and navigation in the Columbia River. At that time we will determine the scope of work required in fiscal year 1984.

Question. Do you have sufficient funds in the fiscal year 1984 O&M budget request to maintain the Columbia River channel to project dimensions?

Answer. The operation and maintenance budget request for Columbia River dredging was developed to provide sufficient funds to generally maintain the channel in a condition that would provide for the passage of most of the anticipated navigation traffic. While full project dimensions may not always be available, flexibility exists within the O&M program for adjustments in the dredging amounts required to provide unrestricted passage of traffic.

ADDITIONAL QUESTIONS SUBMITTED BY CHAIRMAN HATFIELD

Chairman Hatfield. General Bratton, I have some questions on other studies, projects, and O&M activities in the North Pacific Division that I will provide you at a later date. Would you please include the answers in the record.

General Bratton. Yes sir, we will.

[The questions and answers follow:]

Mount St. Helens Emergency Program

Question. Give a breakdown of exactly how the $18 million of Public Law 84-99 appropriations in fiscal year 1982 for Mount St. Helens emergency work has been applied by the Corps of Engineers.

Answer. Expenditures of the $18 million of Public Law 84-99 funds were as follows:

Spirit Lake interim outlet and pumping	$9,000,000
Monitor and evaluate sediment movements on the level of flood protection	1,000,000
Emergency levee raising along Cowlitz River	3,100,000
Emergency dredging of settling basin in lower Toutle River	4,900,000
Total	18,000,000

Spirit Lake Information

Question. Last year, you indicated there was no near-term threat from Spirit Lake. In August 1982, the Governor and President declared an emergency situation. Summarize reasons for this change.

Answer. Last year's prediction was based solely on the assumption that when Spirit Lake filled to a certain elevation, the debris dam would be overtopped. Spirit Lake debris dam was observed late in 1981 just prior to winter rains and snows, and from these observations the debris dam appeared stable. Subsequently, early spring 1982 runoffs severely eroded upstream and downstream slopes of the dam.

An evaluation of the stability of the debris dam, which took into consideration the severe erosion that had occurred and would continue to occur, resulted in a determination that, should the water rise high enough, a failure could occur before the debris dam was overtopped.

Question. What would be the impact on the downstream areas if a break occurred at the Spirit Lake debris plug?

Answer. The U.S. Geological Survey was asked by the Federal Emergency Management Agency to make a study of the impact to be expected by the break of the Spirit Lake debris dam. They have analyzed a plausible but worst-case scenario in which flows in the Cowlitz would be in excess of a million f^3/s and the Castle Rock, Longview-Kelso area would be inundated to depths of 60 and 40 feet, respectively. FEMA intends to extend the study next to the Columbia River.

Question. How effective has the pumping been?

Answer. Pumping has been effective in maintaining the existing level of Spirit Lake. Pumping started at elevation 3,462.2 on November 5, 1982, and the elevation has always been within 2 feet of this. This means that the lake has been held to about 11 feet below the level which would have existed had there been no pumping.

Question. What is your schedule for engineering and construction of a permanent solution?

Answer. Depending upon the alternative selected, design time is estimated between 6 months and 1 year. Construction time is estimated between 18 months and 2 years, again depending upon the alternative chosen. Our recommendations will be contained in the comprehensive plan for Mount St. Helens due to the President in November 1983.

COWLITZ RIVER INFORMATION

Question. Describe the sediment infill of the Cowlitz River channel this winter in the Castle Rock, Lexington, and Longview-Kelso area. Approximately how many feet of infill has occurred in these areas since a 50,000 f^3/s channel was restored by the initial 1980 dredging?

Answer. Sediment infill this winter in the vicinity of Castle Rock has been about 5 feet. In the Longview-Kelso area, infill has been negligible except for 10 to 20 feet of deposition in the sump areas we have excavated just above the mouth of the river. Total infill since completion of dredging in the Castle Rock area has been 20 to 25 feet and 5 to 10 feet in the Longview-Kelso area.

Loss of channel capacity this winter has generally been in the upper reaches; however, this should not be taken to mean that the lower river has stabilized and will pass future sediment loads. It is anticipated that infill in the upper reaches will migrate downstream.

Question. What is the status of the levee raising project?

Answer. To date, all of the emergency levee-raising work along the Cowlitz River has been completed.

Question. Why is this work necessary?

Answer. This levee work is necessary to restore a high degree of flood protection to the towns of Longview, Kelso, Lexington, and Castle Rock. This degree of protection did not exist at the beginning of this winter's rainy season.

Question. What were local sponsor requirements for this work?

Answer. Local interests have provided all the necessary lands, easements, and rights-of-way, any required relocations, agreed to operate and maintain the levees, and to remove the temporary works when no longer required.

Question. Would you bring us up to date on the estimated degree of flood protection at the end of this winter season for the Castle Rock, Lexington, and Longview-Kelso communities?

Answer. One hundred year flood protection was provided for leveed areas assuming the river capacity of the fall of 1982 and completion of recent emergency levee construction. Based upon the estimated infill which has occurred this winter, the level of flood protection will probably be reduced from the 100-year level to 40- to 50-year flood protection in some areas.

We will conduct surveys at the end of this winter season to determine actual infill and levels of protection.

Question. What plans are you developing to maintain an adequate degree of protection for these communities for the 1983–84 winter season?

Answer. Portland district is currently evaluating the impact of this winter's estimated sediment infill in the Cowlitz River. Subsequently, a report on the status of the sediment deposition in the Cowlitz River and the current level of flood protection will be prepared.

TOUTLE RIVER RETENTION BASINS

Question. What is the status of the two debris-retaining structures on the Toutle River?

Answer. The South Fork debris-retaining structure (DRS S–1) was removed in the fall of 1982 and the Weyerhaeuser lease terminated. The Corps has no further liabilities associated with this structure. The North Fork debris-retaining structure (DRS N–1) was breached and overtopped during high flows on the Toutle River after maintenance of the project was terminated. Weyerhaeuser's 3500 haul road has been raised 10 feet through the impoundment area as per lease requirements which will keep company access open. This action is also stabilizing the structure and preventing further deterioration of N–1.

Question. What are the remaining Government obligations at these projects?

Answer. Further Government obligations at N-1 are being reviewed and analyzed at this time and, as I have just indicated, we have no further liability associated with the S-1 structure.

STUDY OF THE COLUMBIA RIVER AT THE MOUTH

Question. What is the current status of your study for deepening the Columbia River entrance channel to serve the existing channel?

Answer. The draft interim report and draft environmental impact statement have been completed. The mandatory 45-day review period for these documents began on January 21, 1983. When review comments have been received from agencies and individuals, the documents will be completed and submitted to the Division Engineer. The Division Engineer's notice is scheduled for completion in May 1983.

Question. Please describe the project that is most likely to result from this study. What is the benefit-cost ratio?

Answer. We expect to recommend deepening the northernmost 2,000-foot width of the existing 5-mile-long channel from 48 to 55 feet and maintaining the remaining 640-foot width along the southern edge of the channel at its present depth of 48 feet. The benefit-cost ratio would be 11.1 to 1.

Question. What would be the construction time required for the proposed channel deepening?

Answer. Initial dredging to achieve project depth could be achieved during a single May–October season.

Question. What would be the additional annual maintenance dredging requirements for this new project and associated costs?

Answer. Initial channel deepening would require removal of 5.5 million cubic yards of material. In subsequent years, annual maintenance dredging would increase from a present level of about 4.4 million cubic yards to 7 million cubic yards. Initial cost of the project, including dredging and range modifications, would be $5,284,000. Additional maintenance dredging would amount to $2,150,000 annually.

COLUMBIA RIVER COAL EXPORT CHANNEL STUDY

Question. The coal export channel study concerns the same area as your Columbia River at the mouth study. How do the two studies relate to each other?

Answer. A separate study—Columbia River at the mouth, Oregon and Washington—addresses the deepening of the entrance channel, between river mile −2 and river mile +3, to provide safe bar crossing conditions for larger ships (38 to 40 feet) which cannot presently utilize the existing 40-foot upstream channel due to the existing unsafe bar conditions.

The Columbia River coal export channel, Astoria, Oreg., study concerns deepening the entrance as well as the river channel upstream to Tongue Point (river mile 18) and assumes that a 55-foot channel will result from the study of the mouth.

Question. How deep is the Columbia River entrance channel now, and how deep would it have to be dredged to accommodate deep-draft coal ships expected to use the Astoria coal export facilities?

Answer. The Columbia River entrance channel is now 48 feet below mean lower low water (MLLW). The Columbia River at the mouth study is addressing a potential channel depth of 55 feet below MLLW. In the Columbia River coal export channel study, assuming a design vessel draft of 55 feet for coal ships, the mouth of the river would have to be dredged to 65 to 70 feet below MLLW.

Question. How much would the additional dredging cost every year?

Answer. At this stage of the study, annual costs are estimated to range from $7 million for a 45-foot MLLW river channel with 60-foot MLLW entrance channel to $27 million for a 55-foot MLLW river channel with a 70-foot MLLW entrance channel. Results of model tests at the waterways experiment station will be used to determine dredging quantities for a more accurate determination of dredging costs.

MOUNT ST. HELENS COMPREHENSIVE STUDY

Question. I understand you are currently conducting a comprehensive study of possible long-term solutions to the Toutle and Cowlitz Rivers flooding problems and Columbia River navigation problem resulting from the eruption of Mount St. Helens. When will this study be completed?

Answer. The comprehensive study will be completed and forwarded to the President by the middle of November 1983.

Question. What are the options that you are considering?

Answer. Among the options which are being considered are: (1) Raise levees; (2) modify highway and railroad bridges; (3) single debris retention structures; (4) planting on debris flow; (5) multiple debris retention structures; (6) dredge Columbia River; (7) Cowlitz River erosion control; (8) Cowlitz River dredging; (9) sediment and stabilization basin and channel constrictions; (10) floodproofing; (11) permanent evacuation; (12) land use regulation; and (13) no action.

Question. How long will it take to begin implementation of the potential improvements?

Answer. Until the comprehensive plan, with its attendant costs and assignment of responsibilities, has been defined, it would be premature to make an estimate of the time required to begin implementation of potential improvements.

Question. How does the Spirit Lake outlet problem relate to this study?

Answer. Study of the Spirit Lake problem is an integral part of the comprehensive plan.

Question. What are the alternative plans to solve the Spirit Lake flood hazard problem?

Answer. Alternative plans include open channels or buried conduits through the debris dam into the North Fork Toutle and tunnel outlets into the Lewis River system and the South Coldwater/North Fork Toutle drainage system.

ROGUE RIVER AT GOLD BEACH, OREG.

Question. Would you bring us up to date on your model studies for the alternative modifications for the Rogue River entrance? Are there any conclusive results?

Answer. Our model testing program has included testing of 61 variations in design elements for three basic plans: Groins, jetty extensions, and new entrances. Preliminary cost estimates for these plans range from $1 to $35 million. We have completed tests of 58 of these variations. Tests presently underway are directed toward analysis of the jetty system essentially as presented in the 1954 project document (S. Doc. 83, 83d Cong., 2d sess.). We expect to complete those tests this spring.

Upon completion of all tests we will prepare a technical report presenting our findings and recommendations.

Question. When will you be able to select the best engineering solution?

Answer. Selection of the best engineering solution would take place after evaluation of the results of model tests now underway. A technical report which will identify the best engineering solution to the shoaling problems is scheduled for completion in September 1983.

Question. What is your capability?

Answer. Subject to the previously stated qualifications, our fiscal year 1984 capability is $90,000 to resume the study to reinforce the existing locally constructed breakwater protecting the Port of Gold Beach's small boat basin. Funds would be used to complete a reconnaissance report. We have no capability for construction of any modification of the entrance.

Question. In previous years, the Corps has indicated a need for a pile dike control structure to relieve some of the project maintenance requirements. What is the status of this structure?

Answer. The L-shaped timber pile groin may be an effective means of stabilizing the shoal along the south jetty but would be essentially experimental. Recent contracts with the Port of Gold Beach indicate support for the groin. Accordingly, construction of a temporary prototype structure is being considered to test its effectiveness. Plans and specifications for the structure are currently being prepared. We have sent a public notice to interested agencies, organizations, and individuals to determine if there are any significant environmental concerns associated with the groin. If no significant concerns are found, we plan to build the test structure during this summer construction season using available O&M funds.

SIUSLAW RIVER AND BAR, OREGON

Question. You have completed preconstruction planning and funds have been provided for construction in fiscal year 1983. When will you be ready to let a construction contract? What is your construction schedule?

Answer. We have scheduled advertisement for bids in June and a contract will be awarded in mid-July 1983 to initiate construction.

Question. What is your fiscal year 1984 capability?

Answer. Subject to the previously mentioned qualifications, our fiscal year 1984 capability would be $13.6 million to continue construction. Project completion schedule would be September 1986.

WILLAMETTE RIVER BASIN, OREGON

Question. I note that in fiscal year 1984 you will continue the feasibility phase of the Mill City diversion. What are your preliminary findings for this interim?

Answer. Several alternative methods of increasing hydropower generation at the Detroit-Big Cliff project were evaluated on a preliminary basis. Among them, the Mill City diversion merits further consideration. With such a project, water in excess of instream minimum requirements would be taken from Big Cliff reservoir and carried along the adjacent north hillside to a headpond and then dropped about 430 feet to a powerhouse on the North Santiam River about 2 miles west (downstream) of Mill City, Oreg.

Preliminary estimates suggest that the optimum powerhouse size would be about 70,000 kW using diverted flows of 1,200 to 2,400 ft^3/s when available.

Question. You have reviewed earlier findings on the Emerald Canal diversion plan. What is the status of that review and what are the findings?

Answer. Our findings confirmed those provided in a 1981 interim report in which it was reported that there was no economically justified project, with the best project benefit-cost ratio being 0.4 to 1. Fiscal year 1982 funds were appropriated to make the review and to provide technical assistance to the locals in conjunction with their recreational plan. Technical assistance continues as requested by local entities in formulating their integrated plan.

Question. What is your fiscal year 1984 capability?

Answer. Subject to the previouslly stated qualifications, our capability is $425,000, an increase of $305,000 above the budget amount. These funds would be used to advance the completion of the Mill City diversion interim study by 12 months ($105,000), advance completion of the comprehensive review by 12 months ($50,000), and resume the Santiam River study ($150,000).

BONNEVILLE NAVIGATION LOCK

Question. Would you discuss the work accomplished to date on the continuation of planning and engineering (CP&E) program?

Answer. Since January 1982, nearly $2.79 million has been expended on the following ongoing activities:

—Field explorations to enable evaluation of geologic conditions in the area of the proposed lock and approach channels, in the area of the Union Pacific Railroad (UPRR) mainline relocation, and in a hillside slide area upstream and downstream of Bonny Rock.

—Two model studies have been initiated at the Waterways Experiment Station in Vicksburg. Construction of the general model which will be used to determine the most hydraulically efficient alinement for the lock has been completed. The sectional model to evaluate filling and emptying stresses and characteristics is under construction.

—Design of the lock walls, gates, and upstream and downstream guidewalls.

—Coordination with UPPR on design of the required track relocation.

—Design of other project features to be relocated: Project access road, utilities, auxiliary water supply, and wells for the hatchery at Tanner Creek.

—Economic analysis of commodity types and tonnages expected to use a new lock and a contract analysis of rates and economic costs associated with rail, truck, and barge transport modes.

—Evaluation of potential disposal sites for excavated material.

—Cultural resource evaluation of the project grounds and likely disposal sites.

—Initiation of the general design memorandum, environmental impact statement supplement, and various feature design memoranda.

—Coordination with higher Corps authorities, Federal, State, and local agencies, special groups, and the general public.

Question. I understand that model studies are a part of your design program. What is the status of these model studies?

Answer. Two models are being constructed, tested, and operated at the Waterways Experiment Station in Vicksburg, Miss. The general model at a 1:100 scale will be used to determine the most hydraulically-efficient lock alinement and its impact on other project features and operations. The basic model has been constructed and is being tested. Operation will begin shortly and is scheduled to be completed in July 1983. The sectional model at a 1:25 scale will be used to determine the operating characteristics and stresses of the lock itself.

This model is under construction. Operation is scheduled to be completed in March 1984.

Question. What was the 1982 traffic through the existing lock?

Answer. During 1982, 8,369,690 tons of commercial traffic traversed the existing lock at Bonneville.

Question. In prior testimony, the Corps stated that the capacity of the lock would be exceeded by 1988. Is that date still good?

Answer. We have seen nothing that would change that date. However, we are now conducting a comprehensive assessment of commodity types and volumes likely to traverse the lock.

Question. What is your fiscal year 1984 capability? If these funds and construction authority are provided, when would this project be ready for construction? What would be your construction schedule?

Answer. Subject to the previously stated qualifications, our fiscal year 1984 capability is $2.4 million to continue ongoing studies. Construction could begin in fiscal year 1985. We estimate that construction could be accomplished in 5 years.

Question. The Pacific Northwest is suffering from high unemployment rates. Could construction be initiated on this project in fiscal year 1984 to alleviate the unemployment problem and meet the critical navigation needs of the region?

Answer. Assuming funding availability and project authorization for construction, we could utilize $6.5 million to initiate construction of this project in fiscal year 1984 to alleviate the unemployment problem in this area. The work would include the following:

(*a*) Stage 1 navigation lock construction which would consist of the excavation of the lock and construction of the upstream cofferdam and guard wall. The work would be laid out so as not to require relocation of the railroad. Total contract amount is estimated at $15 million with an estimated expenditure of $5 million in fiscal year 1984.

(*b*) Relocations which would include relocation of utilities, some of the hatchery facilities, the hatchery wells, and building 23 of the hydraulics lab. Estimated total contract would be $2.5 million with $1.5 million expended in fiscal year 1984.

McNARY SECOND POWERHOUSE, OREGON AND WASHINGTON

Question. Discuss the need for an additional year of CP&E and the associated increase of $1,150,000 in the CP&E estimate?

Answer. During the detailed study phase of CP&E program it became apparent that additional and unanticipated engineering should be accomplished now in order to refine the design and to complete essential design memorandums without having a delay in design effort when authorized to proceed with plans and specifications. The main features of additional and extended planning and engineering are as follows:

(*a*) Additional foundation information for siting the powerhouse ($150,000).

(*b*) Design of the tie-in between the new and the existing powerhouse ($100,000).

(*c*) Studies to determine the need for an impervious blanket in the south abutment nonoverflow section ($100,000).

(*d*) Studies to determine the proper turbines for fish passage ($20,000).

(*e*) Design changes to accommodate existing power transmission lines and appurtenances ($30,000).

(*f*) Advancement of some feature design memoranda originally planned to be done during construction but scheduled to be done now in order to achieve a more orderly and efficient preparation of plans and specifications during the first year of construction ($750,000).

Question. If construction funds are provided in fiscal year 1985, what would be the power-on-line date of the first unit?

Answer. The power-on-line date of the first unit would be August 1990.

Question. I understand that the McNary Dam is the last project in the Columbia River hydroelectric system with a powerhouse not capable of utilizing the full capability of the river flow and upstream storage releases. What regional benefits would be derived from construction of this expanded powerhouse at McNary to better utilize the hydroelectric power potential of the Columbia River?

Answer. There are several benefits that will occur to the regional power system from the McNary second powerhouse. McNary, being one of the first plants on the river, is undersized by present standards, and, as such, is not using available streamflow as effectively as it might. Construction of the second powerhouse will enable the McNary project to better utilize the additional firm energy provided by the Columbia River Treaty projects and other upstream storage. The second powerhouse will also put McNary in better hydraulic balance with adjacent projects, which will permit all of the projects to be operated closer to full pool, thus increasing their energy output. Finally, the additional capacity will permit McNary to carry its share of system load-following capacity and reserve generation.

Question. I understand that this project would be useful with respect to potential power transmission to the Southwest. Will you elaborate on this potential?

Answer. Two classes of power are exported to the Southwest—firm and surplus secondary. For the surplus secondary energy to be usable in the Southwest, it must be shaped to fit demand. While sufficient capacity is available to accomplish this at the present time, studies indicate that by the 1990's, secondary sales may be limited unless additional capacity, of the type which McNary second powerhouse could provide, is constructed. Efforts are also underway to market the Pacific Northwest's present firm energy surplus inthe Southwest. If contracts of this type are implemented, it is likely that additional capacity will be needed during the later years of these contracts to provide the necessary load shaping. McNary second powerhouse would be of value here.

ELK CREEK LAKE, OREG.

Question. As I understand, you are considering changing the dam design from a rockfill embankment to a roller-compacted concrete (RCC) dam. Would you discuss the dam embankment design?

Answer. The original plan of development consisted of a rockfill dam, approximately 233 feet high and 2,685 feet long, containing about 4.3 million cubic yards of material. Included was a free-standing intake tower located on the left abutment with multilevel intake ports for water quality releases and a spillway located on the right abutment with two tainter gates.

The current design proposal consists of a concrete gravity structure constructed with roller-compacted concrete about 244 feet high and 2,575 feet long containing 1.1 million cubic yards of rolled-in-place concrete. The intake tower and spillway are integrated into the structure and located off center toward the left abutment. The tower contains the multilevel intake feature and the spillway consists of three tainter gates.

Question. What are the economic and construction schedule improvements that you expect from a roller-compacted concrete structure?

Answer. Present design affords a total savings of $27 million over that originally proposed. Of this amount, at least $10 million is attributable to the use of roller-compacted concrete in lieu of a rockfill embankment. The balance of the savings is due to refinements in design and reassessment of price levels. Three complete construction seasons are required for either construction method; consequently, there is no change in the construction schedule.

Question. Would you bring us up to date on the Corps' comprehensive study of water quality and fisheries on the Rogue River?

Answer. The Rogue basin fisheries evaluation study was initiated in 1974 for fisheries enhancement, a stated project purpose. We are in the final phase of work on the Lost

Creek portion of the study which will be completed in fiscal year 1986, and are about midway through the Applegate segment which will be completed in fiscal year 1989. A prime example of study results translated into fisheries benefits can be found in our current operation of the Lost Creek project. By delaying the date of minimum flood control pool and maintaining higher minimum winter flows, we have assured that 90 percent of the chinook salmon redds will not be dewatered.

When the study is complete, we will have determined optimal operating criteria for both Lost Creek and Applegate projects and produce annual fisheries benefits estimated at $1.4 million.

Question. What have been your findings with respect to the Elk Creek project?

Answer. Elk Creek currently supports stocks of steelhead trout and coho salmon. Cole River Hatchery constructed at Lost Creek project was designed, in part, to completely mitigate for the loss of Elk Creek fish runs. Water quality studies indicate that following completion of Elk Creek project, elevated turbidity levels will be somewhat prolonged within Elk Creek itself, but that effects on the mainstem Rogue would be minimal.

Operation of Elk Creek project would have very minor effects on water temperatures within the Rogue River.

Question. What is your fiscal year 1984 capability?

Answer. We have not expressed a capability for this project because it is not economically justified at the current interest rate nor has it been analyzed as the next-added increment to the existing system. Serious questions have been raised on the economic justification for this project and a reanalysis of benefits and costs must be made before further funding of construction activities can be supported. The reanalysis has not been scheduled.

Question. If funds are provided, how many jobs would be made available to this area?

Answer. During peak of construction, a total of 350 to 400 people would be employed at the site with 80 percent from the depressed Medford area. Secondary employment would total well over 500.

Question. What is the current unemployment rate of this area?

Answer. County jobless rate in January was over 15 percent.

Question. When would you have effective flood control?

Answer. Effective flood control would be achieved 3 years after construction is resumed.

JOHN DAY LOCK AND DAM, LAKE UMATILLA, OREG.

Question. I note that the completion of the fish facilities at this project has slipped from September 1986 to April 1989. Would you discuss the problems arising from slipping the construction schedule? Also, discuss the impact to the Columbia River fisheries. Does your current schedule meet the requirements of the Northwest Power Planning Council's fish and wildlife program?

Answer. The impact of a 31-month delay to the completion of the John Day lock and dam fingerling bypass system would result in lost annual benefits of $9,287,000. These lost benefits in commercial and sport fishing result from a decrease in the estimated annual number from surviving juveniles passing John Day Dam. Additional intangible adverse impacts of the construction delay include continued heavy losses to the declining and imperiled runs of native upriver Columbia River salmon and steelhead.

Other problems arising from the extended schedule include: The increased allowance for inflation which adds to the project cost estimates; the possibility of further decreasing some already threatened stock of Snake River spring and summer native chinook salmon passing the John Day project; the adverse economic impact on commercial and Indian fishing concerns due to diminishing fish runs on the river and on the coast; and not meeting the previously established completion dates provided to the Northwest Power Planning Council, as well as Federal and State fisheries agencies.

Question. If additional fiscal year 1984 funds were provided, could you regain your prior schedule?

Answer. If sufficient funds were provided in fiscal year 1984 and beyond, we could regain our completion date of September 1986.

Question. What is your fiscal year 1984 capability?

Answer. Subject to the previously stated qualifications, our fiscal year 1984 capability for this project is $13.8 million.

LOWER SNAKE RIVER FISH AND WILDLIFE COMPENSATION PLAN

Question. Project completion has been delayed from September 1987 to September 1988. What is the reason for the delay?

Answer. Delays in contract awards and consequent funding adjustments have caused completion of the project to be delayed 1 year.

Question. What is your fiscal year 1984 capability?

Answer. The $18.7 million included in the President's budget is the correct amount for the plan.

As you may know, the GAO in a review of the Corps plan for construction of Federal hatcheries has raised the possibility that purchases from commercial hatcheries may be more economical. Such an alternative was put forth by the Fish and Wildlife Service in a Department of the Interior study entitled, "Comparative Costs of Alternative Sources of Fish for Federal Management Needs." However, in our judgment, the Interior study contained insufficient data to determine the proposal's applicability to steelhead trout. Accordingly, Secretary Gianelli has asked us to develop a study proposal which would permit an assessment of the GAO recommendations. The evaluation, which would include coordination with the Fish and Wildlife Service, would determine the cost effectiveness and actual capability of commercial hatcheries in the lower Snake River area to raise steelhead trout comparable in quality to those now raised in Federal and State hatcheries and provide a basis for further management and funding decisions.

Nevertheless, in response to your question, from a strictly engineering and construction standpoint, and subject to the previously mentioned qualifications, the fiscal year 1984 capability is $23 million. These funds could be used to advance the Lyons Ferry satellite hatchery phase II 6 months and the Crystal Springs steelhead hatchery 3 months.

Question. Would you bring us up to date on last year's adult return in the Snake River system?

Answer. The number of adult steelhead returning to the Snake River in 1982 totaled 73,404 fish and was the highest recorded since 1968.

Question. How did this run compare with prior runs?

Answer. A dramatic decrease in adult returns was recorded in 1979 with 13,929 being counted instead of the 47,000 average for the previous 5 years. Returns for the subsequent years have remained in the 15,000 to 22,000 range. There is a relationship between jack (immature) returns and the following year adult returns. Jack counts in 1982 were similar to those recorded in 1981 and it is expected that 1983 returns will be in the same general range as 1982.

Question. What is the 1983 outlook?

Answer. Steelhead are responding well to the transportation program and the large number of returning adults in 1982 may be related to the number of smolts transported during the 1979 and 1980 outmigrations. Comparable numbers of steelhead smolts were transported in 1981 and the project adult return in 1983 should be similar to the large return of 1982.

Chinook returns in 1982 (20,133—all races) generally reflected the depressed condition of Snake River stocks.

Question. What is the status of the design and construction of the fish hatcheries?

Answer. Fish hatchery design is approximately 66 percent complete and construction is approximately 24 percent complete as of January 1, 1983.

SMALL SECTION 107 PROJECTS IN OREGON

Question. I notice there is a significant reduction from fiscal year 1983 in the Corps of Engineers request for funds in fiscal year 1984 for small navigation projects not requiring specific legislation. What small navigation projects under section 107 do you have underway in the State of Oregon? What is the status of each and how much funding is required in fiscal year 1984?

Answer. Small navigation projects under section 107 presently underway in the State of Oregon include Bandon small boat harbor and Winchester Bay, both under construction with scheduled completion dates of May 1983 and June 1983, respectively. Charleston small boat harbor is in the plans and specifications phase and will require no more than $1.3 million of Federal funds in fiscal year 1984 to initiate construction. Siuslaw River small boat harbor and south channel, Government Island projects are in the detailed project report phase. Siuslaw will require no more than $60,000 of Federal funds in fiscal year 1984 to complete plans and specifications; and Government Island will require no more than $100,000 of Federal funds in fiscal year 1984 to initiate and complete construction.

Question. Would you have enough funds available to initiate detailed studies that are currently in the early phases of planning?

Answer. Currently there are no Oregon section 107 projects in the early phases of planning; therefore, no funds have been budgeted for them.

CHARLESTON SMALL BOAT HARBOR, OREGON

Question. What is the status of the Charleston small boat harbor project?

Answer. Charleston small boat harbor project has been approved and plans and specifications are scheduled for completion in April 1983.

Question. What is your fiscal year 1984 capability?

Answer. Federal funds not to exceed $1.3 million in fiscal year 1984 would be required.

SIUSLAW RIVER SMALL BOAT HARBOR, OREGON

Question. Would you discuss your studies on the Siuslaw River small boat harbor?

Answer. Draft detailed project report (DPR) and environmental impact statement (EIS) was completed in June 1981 and submitted for agency and public review. A public meeting was held on July 29, 1981, in Florence, Oreg. In general, the project is favored by the local community; however, the Port of Siuslaw, through Lane County, must initiate and receive an exception to goal 16 of Oregon coastal guidelines before a boat basin could be constructed in a conservation designated management area. Also, due to use of an intertidal area in the proposed basin, mitigation would be required in accordance with LCDC coastal guidelines.

The Port of Siuslaw has not initiated the necessary action to accomplish the foregoing.

Question. What is your fiscal year 1984 capability?

Answer. Further processing of the DPR and EIS cannot proceed until issues previously noted are resolved. In the event the Port of Siuslaw is successful in its efforts to obtain an exception and a satisfactory mitigation package is negotiated, $40,000 would be required to complete action on the DPR and EIS and $60,000 could be utilized for completion of plans and specifications in fiscal year 1984.

GOVERNMENT ISLAND CHANNEL, OREGON

Question. Do you have the capability to initiate construction of the Government Island channel project?

Answer. Subject to the previously mentioned qualifications, this project would require no more than $100,000 in fiscal year 1984 to initiate and complete construction.

AUXILIARY FISHWAY WATER SUPPLY POWER UNITS

Question. Last year, Congress provided guidance on the construction authority of the McNary Dam and The Dalles Dam fishwater units and directed the Corps to use $250,000 of available funds for each project to complete the final designs. Would you bring us up to date on the status of your design?

Answer. The existing projects were authorized primarily for hydroelectric power and navigation and became operational in 1953 and 1957, respectively. In February 1981, the North Pacific Division recommended adding additional power units to these projects under the discretionary authority of the Chief of Engineers.

On February 23, 1982, it was determined that the proposed new work was beyond my discretionary authority and that no authority exists which permits our proceeding with project construction. Language contained on page 177 of Senate Report 97–673 provides the views of the Senate committee that the original project authorizations, Public Law 79–14 and Public Law 81–516, provide the required authority. However, my Counsel's opinion indicates that the language contained in the cited report only expresses the committee's views, but does not provide the required authority.

Question. What is the design and construction schedule for these two projects?

Answer. Both projects could be designed and constructed in 3 years if adequate authority and funding were available. First-year funds would be utilized to prepare plans and specifications and advertise a turbine-generator contract. Second- and third-year funds would be used to initiate and complete construction and installation of the turbines and generators.

Question. What are your fiscal year 1984 capabilities for these two projects?

Answer. No capabilities have been established, pending authorization.

OREGON COAST DREDGING BACKLOG

Question. Do you have sufficient funds in the O&M budget request to maintain the Oregon coastal ports to project dimensions?

Answer. Funds included in the President's budget will provide dimensions adequate enough for most user traffic. However, in some cases these may be less than full project dimensions.

Question. Please provide a list of fiscal year 1984 capability for coastal port projects.

Answer. I will provide for the record a table which outlines the President's budget for the Oregon coastal projects, together with the project capabilities.

[The information follows:]

OREGON COASTAL OPERATION AND MAINTENANCE PROJECTS

[Dollar amounts in thousands]

Project	President's budget	Additional project capability	Remarks
Chetco	$383	$110	$60 for dredging and $50 for rock removal near entrance channel.
Columbia River at the mouth.	6,547		Adequate.
Coos Bay	2,283	671	Hopper dredging RM 1 to 10 (217,800 cy).
Coos and Millicoma Rivers	148		Adequate.
Coquille River	431	79	Hopper dredging.
Depoe Bay	128		Adequate.
Port Oxford	163		Adequate.
Rogue River	503	237	Hopper dredging entrance (55,000 cy).
Siuslaw River	1,372	1,069	$274 hopper dredging (86,000 cy); $795 for pipeline dredging RM 1 to 5 (300,000 cy).
Tillamook Bay	218	220	Hopper dredging (70,000 cy).
Umpqua River	770	212	Hopper dredging entrance (100,000 cy).
Yaquina Bay	1,175		Adequate.
Yaquina River	775		Adequate.

Question. Could you give me figures on your dredging backlog on the Oregon coastal projects?

Answer. The information is included in the tabulation I am furnishing in response to your previous question.

Question. In the past the Corps had indicated that they were limited by plant capability and the lack of hopper dredges. How will the laying up of the dredge *Pacific* impact your O&M program?

Answer. In fiscal year 1982, Manson-Osberg Co. from Seattle, Wash., activated use of a light-duty tug-propelled hopper barge for contracting on our coastal projects. Manson has constructed a larger self-propelled hopper dredge which will be available in the early summer of 1983 for additional contracting capability of Corps of Engineers projects in Oregon and Washington.

With this industrial capability, the layup of the dredge Pacific should not affect the O&M program.

Question. What are you projecting in fiscal year 1984 as far as the number of working days for the Yaquina on Oregon coastal projects? How does this schedule compare with the fiscal year 1983 hopper dredging program?

Answer. Our current schedule for fiscal year 1984 shows the *Yaquina* as working approximately 129 days on Oregon coastal projects. For fiscal year 1983, we plan to work the *Yaquina* about 136 days on Oregon coastal projects. A comparison of these two numbers cannot be made directly as in fiscal year 1984, the *Yaquina* will also work Columbia estuary projects at Baker Bay, Skipanon, and Chinook, which will be accomplished by contract in fiscal year 1983.

There are also other variations in the dredging schedule between contract and Corps of Engineers plant which will be utilized to provide a total project maintenance program.

MOUTH OF THE COLUMBIA RIVER

Question. From a dredging standpoint, what is the present condition of the mouth of the Columbia River?

Answer. In the fall survey accomplished for the fiscal years 1981 and 1982 dredging seasons, the channel dimensions of the Columbia River entrance was the best ever accomplished, including those years following work by the original hopper dredge *Essayons* in 1976 and 1956.

Question. Are you able to maintain adequate depths across the bar?

Answer. In recent seasons, we have been able to maintain adequate dimensions across the entrance bar.

Question. When will the new hopper dredge *Essayons* arrive on the west coast?

Answer. We anticipate the hopper dredge *Essayons* will arrive on the west coast in mid-June 1983.

Question. Will you compare this new dredge with the *Biddle*?

Answer. The hopper dredge *Biddle* has a capacity of 3,000 cubic yards of Columbia River sand. The hopper dredge *Essayons* is anticipated to have capacity of aproximately 5,500 cubic yards of Columbia River sand. We estimate the hopper dredge *Essayons* will be able to remove in excess of 6.5 million cubic yards from the Columbia River bar during an average season compared to the capability of the *Biddle* to remove approximately 4 to 4.5 million cubic yards. The initial rental rate for the hopper dredge *Essayons* will be only slightly higher than that of the current rate for the hopper dredge *Biddle* and will result in lower overall cost per cubic yard for the foreseeable future.

Question. How much of your proposed fiscal year 1984 dredging is programed for the *Essayons*?

Answer. We anticipate a full 7½-month hopper dredging year for the dredge *Essayons*.

COLUMBIA AND THE LOWER WILLAMETTE RIVER BELOW VANCOUVER

Question. How much of your fiscal year 1984 budget request is required for normal channel maintenance work and how much is programed for anticipated work resulting from continued sedimentation from Mount St. Helens problem?

Answer. In fiscal year 1984, approximately 9.3 million cubic yards are programed to be removed from this project at a cost of about $10.2 million. Of this, 4.1 million cubic yards at about $5 million is attributable to Mount St. Helens and 5.2 million cubic yards at $5.2 million for normal channel maintenance.

Question. What is your fiscal year 1984 capability?

Answer. Subject to the previously stated qualifications, our fiscal year 1984 capability for this project is $21,178,000. This would be used to dredge the Columbia River miles 64 to 69 of 3.8 million cubic yards of additional Mount St. Helens related infill at a cost of about $4 million in the Portland Harbor area of the Willamette River.

POWERHOUSE REPAIR AND MODERNIZATION PROGRAM

Question. What is the status of your powerhouse repair and modernization program?

Answer. For Bonneville lock and dam project, as of January 1, 1983, the modernization program is approximately 20 percent complete. During fiscal year 1982, four contracts were awarded. Of the total $1.8 million available for fiscal years 1982 and 1983, approximately 50 percent has been spent for engineering, studies, and preparing plans and specifications. The total program is expected to be completed by fiscal year 1986.

As of January 1, 1983, for the John Day lock and dam project there is a total of $4.6 million available, of which $2.8 million in supply or construction have been awarded. Approximately 30 percent of the total fiscal years 1982 and 1983 program has been for engineering.

As of January 1, 1983, at McNary lock and dam, we have committed $3,348,000 in contracts and purchase orders, of which $302,000 has been completed. Our schedule is for committing an additional $7.2 million in contracts, primarily during the second quarter of fiscal year 1983. The program will then be 79 percent committed for all contract work. Estimated expenditures by the end of fiscal year 1983 will exceed $7.7 million for about 43 percent of the total program.

The $4 million fiscal year 1984 program includes $3,127,000 for continuing contract payments; $100,000 to award only one contract; $200,000 for Government-furnished material; and $573,000 for engineering and design and supervision and administration.

Question. Has any improvement been made as far as plant availability rate?

Answer. The excellent plant availability rate for Bonneville project will be sustained by the modernization program. For John Day, a consistent multiyear improvement is not envisioned until after completion of the program in 1988. The plant availability rate for McNary is currently 96 percent. The completed work and the program will assure that this rate is maintained.

Question. Do you have sufficient funds in your O&M budget to accomplish this program on a timely basis.

Answer. Yes.

Question. What is your fiscal year 1984 capability for the Bonneville, John Day, and McNary projects repair and modernization program?

Answer. Subject to the previously mentioned qualifications, our fiscal year 1984 additional capabilities for the powerhouse repair and modernization program is $2,617,000 at Bonneville and $2,825,000 at John Day. We have no additional capability for the repair and modernization work at McNary.

Question. What is your current schedule? What improvements could be made if additional funds were provided?

Answer. The current schedule for Bonneville is to complete the program in fiscal year 1986. If additional funds were provided, we could complete the work in fiscal year 1985. For John Day, completion of the modernization program is expected to be fiscal year 1988. Additional funds would not advance the overall completion date. We are currently scheduled to complete the McNary work in fiscal year 1986 and, as previously indicated, we cannot effectively use additional funds that would advance the completion date.

Question. What is the nature of the modernization work under this program that will increase the efficiency and extend the useful life of the powerhouses?

Answer. The major items of work for Bonneville are related to transformer cooling, generator uprating for two units, fire protection upgrade, modernizing the generator excitation and governors, and provide new turbine packing sleeves. This work will mainly extend the useful life and also increase the unit availability somewhat.

For John Day, the major items are turbine and generator repair, fire protection upgrade, and improvement of the control system. These changes will not only extend the useful life but also significantly increase the unit availability. The modernization work at McNary will involve replacing outdated control and operative component, pertinent to powerhouse operation, with modern components. In many cases, the older components are worn out and near failure and have been out of production long enough so that there are no spare parts nor are complete replacements any longer available. If the components fail completely, some of the powerhouse units would be unusable for long lengths of time, thus reducing plant availability.

FUTURE DREDGING REQUIREMENTS, SIUSLAW, OREG.

Question. Will the construction of the proposed jetty extension project at Siuslaw reduce future dredging requirements?

Answer. Yes, the proposed jetty extension at Siuslaw River entrance would reduce material currently entering the entrance channel, thereby reducing the current maintenance dredging requirements.

UMPQUA RIVER

Question. I note that the fiscal year 1984 budget request is some $458,000 below your actual fiscal year 1982 program. Has the training jetty extension reduced the needs for channel dredging?

Answer. Approximately 500,000 cubic yards were removed from the Umpqua project in fiscal year 1982. Funds in the President's budget for fiscal year 1984 will provide for removal of approximately 288,000 cubic yards. As we have previously indicated, we also have a capability of $212,000 for an additional 100,000 cubic yards for an overall total for fiscal year 1984 of 388,000 cubic yards.

Surveys indicate an improved degree of channel self-maintenance due to the construction of the training jetty. It is anticipated this self-maintaining feature will continue to improve.

Channel realinement is also being studied with the U.S. Coast Guard in order to take advantage of natural changes resulting in completion of the training jetty.

Question. Has this jetty facility proven to be as beneficial to reduced dredging as was originally planned?

Answer. Sir, the amount of scheduled contract hopper dredging for this project has been reduced in fiscal years 1983 and 1984. Training jetty extension has proven to be more beneficial than planned.

Question. Will you obtain project dimensions in fiscal year 1984 with the amount included in the budget request?

Answer. If funded at its capability level in fiscal year 1984, project dimensions should be obtained.

CORPS OF ENGINEERS RESERVE FLEET (CERF)

Question As you know, I have been a strong supporter of the need for a modern minimum fleet of Federal dredges to meet defense and emergency requirements. I have expressed some misgivings about the reserve fleet concept, although I believe there is some merit to this approach. What progress has been made on the CERF?

Answer. We are in the final stages of formulation of the CERF concept and expect to have contractual arrangements finalized with industry during the third quarter of fiscal year 1983.

Question. What do you see as the minimum number of hopper dredges in the minimum fleet?

Answer. The minimum fleet study is currently under review by the administration. We are told the matter should be resolved within the next 30 to 60 days. In the meantime, the Corps has initiated action to get the hopper dredge fleet to the level of six dredges. I believe this level, when combined with the industry fleet, will provide adequate capacity to meet our overall maintenance dredging requirements.

HOPPER DREDGE "ESSAYONS II"

Question. I am particularly concerned about the hopper dredge situation on the west coast where there are special dredging requirements and a lack of private dredging capability. In my view, the most critical need is a replacement for the old, medium-class hopper *Biddle.* I understand that the *Biddle* will be replaced by the new *Essayons II* in May. Is the May 1983 delivery date still operative? Do you see any potential problems with meeting that delivery date?

Answer. We believe the May delivery date is realistic. The *Essayons* has successfully completed its sea trials and the dredging trials will start the first week in March.

NATIONAL BENEFITS

Question. What kind of economic benefits are generated by the Corps projects nationwide?

Answer. A tabulation which provides quantitative benefits provided by completed water resources projects in our investment program follows:

Economic benefits of Corps projects

Flood control (billion dollars):	
Flood damages prevented through fiscal year 1982	$105.7
Expenditures for flood control facilities	$19.5
Navigation (million tons—1981):	
Coast harbors and channels	1,148.0
Great Lakes harbors and channels	179.0
Inland and intracoastal waterways	614.0
Total	1,941.0
Water supply: Gallons of water supply storage (billions)	2,490.0
Water quality control: Storage capacity (million acre-feet)	2.3
Power:	
Installed capacity (million kilowatts)	19.4
Net generation (billion kilowatt hours—1982)	76.5
Revenues (millions of dollars through fiscal year 1982)	$3,637.6
Recreation: Recreation-days (millions)	480.0

INLAND WATERWAY SYSTEM IMPROVEMENTS

Question. General Bratton, your statement mentions the fact that many of the locks and dams associated with this Nation's inland waterway transportation system are nearing their 50-year design life.

Could you describe in more detail the conditions of some of the major structures and what benefits are derived by the Nation from the inland waterway system? Also, in your professional judgment, which facilities are the most critical in terms of replacement and/or modernization and why?

Answer. As of January 1, 1983, about 61 of our lock facilities were over 50 years of age; this represents about 27 percent of the total number of commercial navigation locks maintained by the Corps. A more precise delineation is as follows:

Number of locks	*Age (years)*
107	0–40
57	41–50
46	51–100
15	101–150

The Great Lakes coastal and inland waterways carry about 16 percent of total U.S. intercity freight in terms of tons, but over 25 percent in terms of ton-miles. Barges transport about 50 percent of all corn moved to ports for export and about 60 percent of all soybeans. The benefit to consumers and the Nation is in the low cost of water transportation which helps to reduce inflation and make U.S. products competitive in the world market.

The national waterways study indicates that the following projects are the most critical in terms of need for replacement and/or modernization: Locks 26; Gallipolis lock and dam; inner harbor canal lock (GIWW); Oliver lock and dam; and Bonneville lock.

BONNEVILLE NAVIGATION LOCK

Question. Also, General Bratton, I believe your statement correctly points to the need for a long-term program of rehabilitation and upgrading—and I would add modernization—of these aging facilities; and how necessary careful planning for the necessary design and scheduling is to the overall effort. Could you explain, then, why the 1984 budget does not include funds to complete the planning and design of the new Bonneville navigation lock?

Answer. We did not include a budget request for this project because of the uncertainties over the early resolution of navigation user fees and cost sharing.

FISCAL YEAR 1984 OPERATIONS AND MAINTENANCE POLICY

Question. Does the budget request for operations and maintenance anticipate any change in policy similar to the $150 million reduction in funding proposed in the 1983 budget?

Answer. The fiscal year 1983 budget reflected a shortage of $150 million for operation and maintenance of Corps projects based on user fee legislation, enactment of which did not occur, and the Fiscal Year 1983 Continuing Resolution precluded any changes in normal operation and maintenance of Corps projects. However, we have requested a transfer of $110 million from construction, general, to operation and maintenance, general, to permit us to perform all necessary operation and maintenance in fiscal year 1983.

The fiscal year 1984 operation and maintenance budget request reflects a policy which allows funds sufficient for continued operation and maintenance of Corps projects at fiscal year 1983 levels to assure a balanced, cost-effective program. Five navigation projects will be converted to caretaker status in fiscal year 1984 because the level of commercial tonnage, which is zero in most cases, does not justify continuation of regular operation and maintenance.

Question. You indicate that sufficient funds are requested to operate and maintain deep-draft harbors and inland waterways consistent with commercial traffic requirements. Could you explain this in more detail?

Answer. Yes. This simply means that the Corps will continue to perform dredging and necessary maintenance in channels and harbors and to operate and maintain locks and dams on all navigation facilities which are clearly commercially active. As I stated earlier, several recreational navigation projects will be placed in caretaker status because they handle little or no commercial tonnage.

ADEQUACY OF FISCAL YEAR 1984 OPERATIONS AND MAINTENANCE BUDGET REQUEST

Question. Is the $1.61 billion budget request sufficient to accomplish all of the normal operation and maintenance requirements nationwide without an increase in the backlog of work that is essential to project operation or safety? In your opinion, does the Corps need additional funds in order to assure the operation and performance of Corps projects?

Answer. Our operation and maintenance budget request is adequate to assure continued safe and efficient operation and maintenance of Corps projects nationwide. With progressive aging of project structures, it is reasonable that certain maintenance items will go unfunded. While such work is desirable to minimize further deterioration of project features, it can be deferred on a selective basis to later years without significant adverse effects on current safety conditions or operational efficiency.

TRANSFER OF CONSTRUCTION, GENERAL, FUNDS TO OPERATION AND MAINTENANCE

Question. The budget request includes a transfer of $110 million of construction, general, funds to operations and maintenance activities. Why is this transfer needed and what would be the impact if it is not approved?

Answer. The Further Continuing Appropriations Act of 1983 provides for an appropriation of funds for the Corps operation and maintenance activity in the amount of $1,023,667,000, which is the rate of funding for O&M in fiscal year 1982. This amount falls short of what is needed to comply with the language of the CRA which precludes any significant change in the normal operation and maintenance of Corps projects.

This is due to normal price level increases and the completion of additional projects and segments of projects. The $110 million transfer is essential to perform normal operations and critical maintenance, including dredging. The potential impacts are decreased services, vessel groundings, reduced navigation loading, loss of hydroelectric generating capacity, breakwater and structural deterioration, and increased hazards to public health and safety. The transfer is needed late in the third quarter of fiscal year 1983, around May and June, in order not to delay the maintenance work, most of which will be accomplished by contract. A delay in the proposed transfer would severely disrupt our program.

AVAILABILITY OF FUNDS FROM CONTINUING RESOLUTION

Question. It has come to our attention that the GAO has asked a number of agencies under the jurisdiction of this subcommittee for their views on the availability provided by the continuing resolution. The issue is whether the funding provided by the continuing resolution shall remain available until expended or lapse on September 30, 1983.

What are your views on this issue and what impact would limited, 1-year availability have on your programs and activities?

Answer. It would appear that the intent of the continuing resolution was to apply the same appropriation account designation in fiscal year 1983 as was the case in fiscal year 1982.

For the Corps of Engineers civil works programs, this means that all accounts except general expenses were intended to be no-year funds. This interpretation is consistent with the way the Office of Management and Budget has apportioned the funds and it is my understanding that it is the way the Appropriations Committees intended the provisions of the continuing resolution authorization to apply. We are now operating based on this interpretation.

If the funds were to lapse on September 30, 1983, it would create an impossible recordkeeping problem. Every project and study would require two sets of records; one to account for the no-year funds carried over from preceeding years and another to account for the fiscal year 1983 1-year money. Our accounting system is not geared to accommodate such a doubling of records.

FLOOD CONTROL AND COASTAL EMERGENCIES FUNDING

Question. What was the status of funding available for flood control and coastal emergencies prior to Hurricane Iwa which hit the Hawaiian Islands in November 1982?

Answer. Mr. Chairman, as of the end of October 1982, $31 million remained uncommitted in the FCCE emergency fund; however, this included $6.5 million earmarked for Cowlitz and Toutle Rivers flood control activities by Public Law 97-216.

Question. Since November, how much money has been allocated for the various emergencies you mentioned; that is, Hurricane Iwa, Mississippi River basin flooding, flooding in Arkansas, Missouri, Louisiana, and Illinois, and severe storms along the Pacific coast?

Answer. Mr. Chairman, in response to the various emergencies mentioned, we have already allocated $3.9 million for emergency operations and rehabilitation actions and have $4.2 million in known emergency operations activities that will require reimbursement. An estimated additional $4.8 million in rehabilitation projects under Public Law 84-99 have also been identified and this figure is expected to increase due to these events.

Question. What is the current status of available funding for the remainder of 1983?

Answer. Mr. Chairman, the following table shows the current status of the emergency fund:

STATUS OF EMERGENCY FUND

[In millions of dollars]

Balance as of October 31, 1982	30.6
Continuing resolution appropriation, fiscal year 1983	29.9
Subtotal	60.5
Allocations:	
Activities other than November–January emergencies	−5.1
Mount St. Helens activities	−6.5
Fiscal year 1983 disaster preparedness program	−6.9
November–January emergencies	−3.9
Total	−22.4
Balance as of February 22, 1983	38.2
Projected requirements:	
Reimbursement of emergency operations	−4.2
Rehabilitation (current estimate)	−4.8
Total	−9.0
Funds available to meet unknown emergencies	29.2

SPRING FLOOD POTENTIAL

Question. Could you give the committee some idea of your assessment of the flood potential for this spring?

Answer. Mr. Chairman, at this time we cannot project what specific flood problems we will have this spring. We are monitoring closely some potential problem areas which include the lower Mississippi River Valley where many flood control reservoir levels are well above normal, rivers are full and saturated ground conditions exist; the Southeast where river levels have risen recently and ground conditions have become saturated; California, particularly central and north, where saturated ground and above-normal snowpacks exist; and in parts of the Pacific Northwest where above-normal snowpacks and high river levels exist. However, specific problems will depend on rate of melt of snowpacks or intensity of storm events which cannot be predicted at this time. In other parts of the country, conditions that could result in major flooding do not currently exist.

With a large part of the flood season ahead, we will continue to monitor conditions and stand ready to respond.

Question. In your professional opinion, are sufficient resources available in the emergency fund to cover all likely contingencies for the remainder of 1983 and 1984?

Answer. Mr. Chairman, I feel we have adequate funds in the emergency fund to meet known needs and provide a significant contingency amount to meet unknown emergencies that might occur in fiscal year 1983. However, should a major disaster occur which requires resources exceeding our contingency amount, I can reprogram available funds from other appropriations to meet the emergency needs until supplemental funds can be provided.

The fiscal year 1984 budget contains a request for $10 million which essentially provides for only the disaster preparedness program. Although the 10-year average annual expenditure from the emergency fund is $45 million per year, excluding Mount St. Helens, there is a wide year-to-year fluctuation in emergency demands. I believe the ability to reprogram funds from other appropriations and the historically rapid provision of supplemental funding when needed preclude the necessity of having a large contingency fund sitting idle during these tight budget times.

Question. If emergency funds are not available to cover unforeseen natural disasters for the remainder of 1983 and 1984, will you request sufficient supplemental funding to cover such emergencies and repay funds which may be borrowed from other civil works projects?

Answer. Yes, in such circumstances I would request supplemental funding.

ACTIVITIES CONTINGENT UPON AUTHORIZATION

Question. Could you provide for the record a list of all programs, projects, or activities in the 1984 budget, the use of which is contingent upon enactment of authorizing legislation.

Answer. There are no programs, projects, or activities in the 1984 budget which are contingent upon enactment of authorizing legislation. However, the Corps net budget request takes into account offsetting receipts in the amount of $454 million which are contingent upon enactment of revised navigation cost recovery and recreation user fee legislation. Failure to enact this legislation would not reduce the funding of any specific program, project, or activity, but would reduce funds deposited to the Treasury.

FIVE-YEAR INVESTMENT PROGRAM

Question. Provide for the record your current 5-year investment plan for water resource development.

Answer. We did not prepare a 5-year investment plan this year. The plan in its current format was not in keeping with the realities of the tight budget climate that now exists, nor with the policies of the Department of the Army regarding new construction starts.

When the user fee legislation, cost sharing, and upfront financing issues are resolved, we will be able to prepare a plan that represents a more realistic view of our future program possibilities.

PROJECTS IN LITIGATION

Question. Would you also supply for the record an update of all of your projects which have been initiated but are being delayed due to litigation? Include a brief narrative on the nature, status, and schedule of the litigation.

Answer. As of February 22, 1983, the following Corps projects have been initiated but are being delayed due to litigation:

Cooper Lake, Tex.—On December 8, 1978, the U.S. District Court for the Eastern District of Texas found the final environmental impact statement prepared for this project legally inadequate and enjoined further work on it. At that point, land acquisition was 99-percent complete. The Corps then prepared a supplemental environmental impact statement to correct the deficiencies found by the court. However, on December 30, 1982, the court issued a decision finding the supplement legally inadequate and continued the injunction. The Government plans to appeal the decision. (*Texas Committee on Natural Resources* v. *Alexander.*)

Cross Florida Barge Canal, Fla.—In 1981, the court dismissed the lawsuit but continued in effect the injunction prohibiting the Corps from doing any work in the canal right-of-way without its approval. No further construction of the authorized project is planned. (*Environmental Defense Fund* v. *Corps of Engineers,* M.D.Fla.)

Harvey Canal-Bayou Barataria Levee, Louisiana.—Landowners challenged the validity of the Corps' decision to modify this flood control project by deleting land reclamation features, including a pumping station. In 1980 the district court held the modification was valid. The plaintiffs appealed. On March 17, 1982, the fifth circuit held that, while the decision was based on cogent policy reasons and was not arbitrary, it was issued without first obtaining local assurances for the modification. The case was remanded to the district court, which, in turn, remanded the matter to the Corps with instructions to supplement the record. The New Orleans District is preparing a supplement. No further hearings are currently scheduled. (*Creppel* v. *U.S. Army Corps of Engineers,* Civil No. 77-25.)

Lake Pontchartrain hurricane protection, Louisiana.—In 1977, the court enjoined work on the Chalmette and New Orleans east portions of the hurricane protection plan and on the proposed barrier structures at Chef Menteur Pass and the Rigolets; the court ruled that the EIS was inadequate. In 1978, at the Government's request, the court modified its order, ruling that certain portions of the project which had minor environmental impacts, which afforded flood protection, and which were separate and independent from the barrier structures were excluded from the injunction. The Corps is preparing a revised environmental impact statement. No further hearings are scheduled at this time. (*Save Our Wetlands, Inc.* v. *Rush,* E.D.La.)

Libby additional units and reregulating dam, Montana.—In 1978, the court enjoined construction on the project, finding that Congress had not authorized it and that the Corps had not considered alternatives adequately. The Government appealed, and the ninth circuit enjoined construction of the reregulating dam and allowed placement of additional units. The court found that the reregulating dam was not authorized, but it did not rule on the adequacy of the environmental impact statement. The injunction remains in effect. No further work on the reregulating dam is planned at this time. (*Libby Rod and Gun Club* v. *Poteat*, D.Wash.)

Luxapalia Creek, Ala. and Miss.—Construction on this project has been enjoined since 1976, when the court issued a ruling that the environmental impact statement was legally insufficient. The Corps is currently engaged in studies leading toward a new environmental impact statement. In 1981, the State of Alabama and the United States filed a joint motion for dissolution of the injunction and dismissal of the suit. The Alabama Conservancy, Inc., and Birmingham Audubon Society opposed the motion and moved to intervene. In 1982, the court refused to dismiss the case and permitted the environmental groups to intervene. The State has appealed that decision. The appeal is pending. (*State of Alabama* v. *U.S. Army Corps of Engineers*, N.D.Ala.)

Papillion Creek and tributaries, Nebraska.—The original project called for the construction of 21 dams in the Papillion Creek basin. In 1975, the court enjoined construction at site 10, concluding that because the rest of the project was being reevaluated and was likely to be modified, continuation of work at site 10 was not within the congressional mandate. That injunction remains in effect. Congress appropriated funds for sites 18 and 20 in fiscal year 1981, and in 1982 the plaintiffs moved to enjoin work on site 18. The court denied the motion in September 1982. Construction has been planned but not yet started. No further hearings are scheduled at this time. (*Papillion Valley Preservation Association* v. *Corps of Engineers*, D.Neb.)

Santa Paula Creek flood control project, California.—This project was enjoined in 1976 because the court found the environmental impact statement prepared for it inadequate. A new environmental impact statement has been prepared and is under review. No hearings are scheduled at this time. (*Friends of Santa Paula Creek* v. *Callaway*, C.D.Cal.)

Tampa Harbor, Fla.—On December 22, 1982, the court ruled that the Corps was illegally disposing dredged material into the ocean; EPA's designation of the disposal site was improper and the Corps' studies were inadequate. Continued dumping at the site was enjoined. The Government did not appeal the decision. The Corps is waiting for EPA to designate another site and is also considering other alternatives. (*Manatee County* v. *Gorsuch*, M.D.Fla.)

Wallisville Lake, Trinity River, Tex.—In 1973, the district court enjoined the Trinity River project and further work on Wallisville Lake on the ground that the project's environmental impact statement was inadequate. The court found that Wallisville was an increment of the Trinity River project and required the Wallisville environmental impact statement to include an assessment of the effects of the Trinity project and its effect on Wallisville. The Government appealed. The fifth circuit reversed, holding that the projects were distinct and that the Wallisville environmental impact statement should be considered separately. However, the court directed the Corps to prepare a supplemental statement on Wallisville and continued the injunction. Review of a post-authorization change report and accompanying environmental impact statement for Wallisville and a general design memorandum and accompanying environmental impact statement for Trinity River is pending. No further hearings are scheduled at this time. (*Sierra Club* v. *Froehlke*, S.D.Tex.)

West Tennessee tributaries, Tennessee.—The court enjoined work on this project in 1973 on the ground that the environmental impact statement prepared for it was legally inadequate. In 1978, the court also found the supplemental environmental impact statement inadequate and continued the injunction. The injunction remains in effect. On February 9, 1983, the Corps filed a second supplemental environmental impact statement with EPA. The parties are pursuing settlement negotiations and no further hearings are scheduled at this time. (*Akers* v. *United States*, W.D.Tenn.)

Lawsuits challenging the Barber's Point project in Hawaii, the Stonewall Jackson Lake project in West Virginia, and the Tennessee-Tombigbee Waterway are also pending. However, construction on these projects has not been enjoined and work is proceeding.

The lawsuits involving the Richard B. Russell Dam, Stockton Dam, and Harry S. Truman Dam have been concluded.

NEW CONTRACT AWARDS FOR LAST QUARTER OF FISCAL YEARS 1983 AND 1984

Question. Please provide for the record a list of the new contracts the Corps plans to award in the last quarter of fiscal year 1983, including a brief description of the work, the estimated funding requirement, the estimated award date, and other data similar to that provided last year. The committee would also like similar information for the new contract awards scheduled for fiscal year 1984.

Answer. I will provide that information for the record. The list includes contracts for the fiscal year 1983 new construction starts included in the May 25, 1982, budget amendment and the proposed fiscal year 1984 new construction starts, as applicable. We are hopeful that Congress will approve these new starts so these contracts can proceed on schedule. In addition, to the construction contracts listed, it is estimated that approximately 1,500 contracts to operate and maintain certain features of some 700 civil works projects will be awarded during fiscal year 1984. Costs of these contracts will total more than $504 million, representing 44 percent of the total request for the operations and maintenance, general, program.

[The information follows:]

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FISCAL YEAR 1983

[Contract amounts equal or greater than $100,000]

LOWER MISS VALLEY DIVISION

SORT: DIVISION,PROJECT DESCRIPTION,LINE ITEM DESCRIPTION

PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1983 REQ'MT ($000)	FY 1984 REQ'MT ($000)	BALANCE COMPLETE ($000)
CHANNEL IMPROVEMENT					
STONE BANK PAVING FY84	AUG 83	413	0	413	0
STONE BANK PAVING	AUG 83	2500	10	2490	0
***** PROJECT TOTAL		2913	10	2903	0
CLARENCE CANNON					
COUNTY RD. BARRICADES OBLIT.	JUL 83	211	50	141	20
TRUCK CRANE	AUG 83	305	0	305	0
***** PROJECT TOTAL		516	50	446	20
KASKASKIA ISLAND DRAINAGE AND LEVEE DISTRICT					
LEVEES ITEM 3B	JUL 83	1135	250	658	227
LEVEES ITEM 4	AUG 83	4470	300	2630	1540
***** PROJECT TOTAL		5605	550	3288	1767
KASKASKIA RIVER NAVIGATION					
CANEL EX-REV 28.4 TO 32.3	JUL 83	13400	1286	5100	7014
***** PROJECT TOTAL		13400	1286	5100	7014
MISS R BTW OHIO MO REG WORK					
REVETMENT MI. 111.1-109.9	JUL 83	1520	460	840	220
ROCK REMOVAL 38.6-38	JUL 83	567	101	326	140
***** PROJECT TOTAL		2087	561	1166	360

MISS. RIVER GULF OUTLET					
CHALMETTE AREA FORESHORE - TEST PH 2	JUL 83	500	500	0	0
***** PROJECT TOTAL		500	500	0	0
MISSISSIPPI RIVER LEVEES					
CANAL-TOULOUSE, LA FLOODWALL M 94.9 - 94.6L	AUG 83	3748	125	2151	1472
***** PROJECT TOTAL		3748	125	2151	1472
OUACHITA & BLACK RIVERS					
REMOVE EXISTING STRUCTURE (CALION)	JUL 83	731	0	731	0
REMOVE EXISTING STRUCTURE (FELSENTHAL)	JUL 83	640	320	0	0
***** PROJECT TOTAL		1371	320	731	0
RED RIVER WATERWAY					
GRAND BEND REALL & STAB, M98-95 (POOL 2)	JUL 83	8120	380	2500	5240
***** PROJECT TOTAL		8120	380	2500	5240
MOJO RIVER DRAINAGE AND LEVEE DISTRICT					
LEVEE RAISE CLOSURE STRUCTURE	AUG 83	2660	50	1149	1461
***** PROJECT TOTAL		2660	50	1149	1461
***** DIVISION TOTAL FOR LOWER MISS VALLEY		40920	3832	19434	17334

MISSOURI RIVER DIVISION

CHATFIELD LAKE, CO					
CHANNEL STAGE 2	JUL 83	3149	597	1211	1341
***** PROJECT TOTAL		3149	597	1211	1341
***** DIVISION TOTAL FOR MISSOURI RIVER		3149	597	1211	1341

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FISCAL YEAR 1983—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION,PROJECT DESCRIPTION,LINE ITEM DESCRIPTION

PROJECT NAME: DESCRIPTION OF WORK	EST AWARD DATE	NORTH CENTRAL CONTRACT AMOUNT ($000)	FY 1983 REQ'MT ($000)	DIVISION FY 1984 REQ'MT ($000)	BALANCE COMPLETE ($000)
BETTENDORF, IA					
STG III LEVEES & FLOODWALLS (NC)	AUG 83	7600	50	1100	6450
***** PROJECT TOTAL:		7600	50	1100	6450
DAVENPORT, IA					
STG I WATER TREATMENT PLANT	SEP 83	1110	900	210	0
***** PROJECT TOTAL:		1110	900	210	0
I&M, LOCKPORT L&D, IL:					
REPLACEMENT AND MODIFICATION OF LOCKGATES AND MACHINERY	AUG 83	10300	60	6400	3840
***** PROJECT TOTAL:		10300	60	6400	3840
SAYLORVILLE LAKE, IA					
STG III FLOODWAY CORRIDOR (COST SHARED)	AUG 83	780	38	742	0
***** PROJECT TOTAL:		780	38	742	0
WATERLOO, IA					
STAGE VG, SEWER & STREET RELOC	SEP 83	125	0	125	0
UNIT C, STG VG, BLOWERS CREEK	AUG 83	2940	350	1000	1590
***** PROJECT TOTAL:		3065	350	1125	1590
***** DIVISION TOTAL FOR NORTH CENTRAL:		22855	1398	9577	11880

		NORTH PACIFIC		DIVISION	
CHENA RIVER LAKES					
BLDGS GROUNDS & UTILITIES WAREHOUSE & OFFICE	JUL 83	1438	1000	438	0
LEVEES & DRAINAGE CHANNEL A EAST INT. DRAINAGE	SEP 83	3200	0	1000	2200
***** PROJECT TOTAL		4638	1000	1438	2200
CHIEF JOSEPH ADDITIONAL UNITS					
BLDGS, GROUNDS & UTILITIES - PROJECT SIGNS	AUG 83	250	250	0	0
F & WL FACIL - MITIGATION MAINT. FACILL	AUG 83	100	100	0	0
***** PROJECT TOTAL		350	350	0	0
LOWER COLUMBIA RIV BASIN BANK PROTECTION, OR & WA					
BANK STABILIZATION ARMSTRONG & HUDSON LOCATIONS	AUG 83	425	225	200	0
BANK STABILIZATION CASH DOLLAR, WHITE, 122 AVE & FRAZER LOCA	JUL 83	1425	875	550	0
***** PROJECT TOTAL		1850	1100	750	0
LOWER SNAKE F & WL COMPENSATION					
F & WL FACIL - WALLOWA SAT TRAP FAC SPW & REAR & INCU	AUG 83	3556	300	3056	0
F & WL FACIL - LYONS FERRY SAT REAR FAC, PH I - CURL LAKE CO	JUL 83	1100	425	675	0
***** PROJECT TOTAL		4456	725	3731	0
WILLAMETTE RIVER BASIN BANK PROTECTION					
BANK STABILIZATION BOAT RAMP LOCATION	JUL 83	150	150	0	0
***** PROJECT TOTAL		150	150	0	0
***** DIVISION TOTAL FOR NORTH PACIFIC		11444	3325	5919	2200
		OHIO RIVER		DIVISION	
CAVE RUN LAKE, KY					
CONTROL TOWER REMEDIAL WORK	JUL 83	670	175	495	0
***** PROJECT TOTAL		670	175	495	0
MUSKINGUM RIVER LAKES, OH (DSA)					
LEESVILLE	AUG 83	690	100	400	190
***** PROJECT TOTAL		690	100	400	190

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FISCAL YEAR 1983—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1983 REQ'MT ($000)	FY 1984 REQ'MT ($000)	BALANCE COMPLETE ($000)
OHIO RIVER DIVISION					
SMITHLAND LOCKS & DAM, ILL IN & KY					
PAVING ACCESS ROAD	JUL 83	218	178	40	0
***** PROJECT TOTAL		218	178	40	0
SOUTHWESTERN JEFFERSON COUNTY, KY					
POND CREEK PUMP PLANT	SEP 83	27620	0	4150	23470
***** PROJECT TOTAL		27620	0	4150	23470
STONEWALL JACKSON LAKE, WV					
EQUITABLE GAS COMPANY-PHASE II RELOCATION	JUL 83	1400	200	650	550
EQUITABLE GAS COMPANY-ACCESS ROADS RELOCATION	JUL 83	4000	300	1400	2300
***** PROJECT TOTAL		5400	500	2050	2850
***** DIVISION TOTAL FOR OHIO RIVER		34598	953	7135	26510
SOUTH ATLANTIC DIVISION					
AIWW-REPLACEMENT OF FEDERAL HIGHWAY BRIDGES					
COINJOCK BRIDGE CONSTRUCTION	SEP 83	12000	0	4439	7561
***** PROJECT TOTAL		12000	0	4439	7561
COOPER RIVER					
POWER PLANT MICROWAVE FACILITY	AUG 83	250	0	250	0
***** PROJECT TOTAL		250	0	250	0

LITTLE RIVER INLET					
INNER CHANNEL	SEP 83	1217	0	1217	0
***** PROJECT TOTAL		1217	0	1217	0
PORTUGUES & BUCANNA RIVERS, PR					
UPPER PORTUGUES CHANNEL SECTION 7	SEP 83	3724	0	1926	1798
***** PROJECT TOTAL		3724	0	1926	1798
RANDLEMAN LAKE					
ACCESS ROADS AND PARKING AREA	AUG 83	287	170	84	33
***** PROJECT TOTAL		287	170	84	33
RICHARD B. RUSSELL DAM & LAKE					
GEORGIA STATE ROADS RELOCATION	JUL 83	191	191	0	0
OXYGEN PRODUCING/STORAGE FACILITY	AUG 83	7500	500	3700	3300
REMAINING EAST ACCESS ROAD	JUL 83	670	300	370	0
RESERVOIR TOPPING & FLOTATION REMOVAL	AUG 83	2853	200	2653	0
***** PROJECT TOTAL		11214	1191	6723	3300
TENNESSEE-TOMBIGBEE WATERWAY					
ALICEVILLE - SITE UTILITIES	AUG 83	330	55	275	0
ALICEVILLE - BOATHOUSES	AUG 83	330	54	276	0
BAY SPRINGS - DAMSITE MAINTENANCE FACILITIES	JUL 83	3621	341	1805	1475
BAY SPRINGS - CROW'S NECK ENVIRONMENTAL EDUCATION CENTER	JUL 83	2988	200	1600	1188
BAY SPRINGS - CLEARING AREA E	JUL 83	491	200	291	0
COLUMBUS - SITE UTILITIES	JUL 83	310	50	260	0
***** PROJECT TOTAL		8070	900	4507	2663
***** DIVISION TOTAL FOR SOUTH ATLANTIC		36762	2261	19146	15355

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FISCAL YEAR 1983—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	SOUTH PACIFIC CONTRACT AMOUNT ($000)	FY 1983 REQ'MT ($000)	DIVISION FY 1984 REQ'MT ($000)	BALANCE COMPLETE ($000)
DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA					
BANK STABILIZATION - PHASE II	JUL 83	229	229	0	0
ROCKPILE ROAD UNIT 2	AUG 83	7456	500	5547	1309
***** PROJECT TOTAL		7685	729	5547	1309
MERCED COUNTY STREAMS, CA					
BEAR DAM - CULTURAL RESOURCES PRES.	JUL 83	250	250	0	0
CASTLE DAM - POWER LINE RELOCATION	JUL 83	360	210	150	0
***** PROJECT TOTAL		610	460	150	0
PHOENIX, AZ & VICINITY (STAGE 2 & REMAINING WORK)					
NEW RIVER DETENTION BASIN - C4 CONTRACT	JUL 83	12149	1891	6940	3318
***** PROJECT TOTAL		12149	1891	6940	3318
SAN FRANCISCO BAY TO STOCKTON, CA					
MCDONALD ISLAND TO JERSEY ISLAND	JUL 83	11100	450	5100	5550
***** PROJECT TOTAL		11100	450	5100	5550
WALNUT CREEK, CA					
PINE & GALINDO CREEKS - EROSION CONTROL	AUG 83	450	100	350	0
***** PROJECT TOTAL		450	100	350	0
***** DIVISION TOTAL FOR SOUTH PACIFIC		31994	3630	18187	10177

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                                                                         SOUTHWESTERN          DIVISION
ARCADIA LAKE, TX

        CLEARING                                              SEP 83        525        0       469      56
        FENCING (REM)                                         SEP 83        472        0       313     159
        TURNER TURNPIKE                                       JUL 83       8698     1206      3532    3960

***** PROJECT TOTAL:                                                       9695     1206      4314    4175

CORPUS CHRISTI SHIP CHANNEL:

        CONSTR OF RETAINING FOR DREDGE MATERIALS (AREA 1 & RINCON)   JUL 83    5300      900      4400       0

***** PROJECT TOTAL:                                                       5300      900      4400       0

EL DORADO LAKE, KS

        REC STAGE II                                          AUG 83       4607      150      3254    1203
        RECREATION FACILITIES                                 AUG 83       4607      150      3254    1203

***** PROJECT TOTAL:                                                       9214      300      6508    2406

JOE POOL LAKE

        COUNTY ROADS PT III                                   AUG 83       3069      200      2869       0

***** PROJECT TOTAL:                                                       3069      200      2869       0

MCCLELLAN-KERR AR R NAV SYSTEM, LOCKS & DAMS

        POWER LINE TO SITE                                    SEP 83        755       10       745       0

***** PROJECT TOTAL:                                                        755       10       745       0

RAY ROBERTS LAKE

        COOKE CO ELEC LINES                                   SEP 83        141       16       125       0

***** PROJECT TOTAL:                                                        141       16       125       0

SAN ANTONIO CHANNEL IMPROVEMENT, TX

        EXCAV., WALLS, & EROSION CONTROL - UNIT 7-3-1         JUL 83      11721     1153      5118    5450

***** PROJECT TOTAL:                                                      11721     1153      5118    5450
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NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FISCAL YEAR 1983—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	SOUTHWESTERN CONTRACT AMOUNT ($000)	FY 1983 REQ'MT ($000)	DIVISION FY 1984 REQ'MT ($000)	BALANCE COMPLETE ($000)
TAYLORS BAYOU, TX					
SALT WATER GATE & DIVERSION CHANNEL STA. 153 TO 152.92	JUL 83	5770	530	2450	2790
***** PROJECT TOTAL		5770	530	2450	2790
VINCE AND LITTLE VINCE BAYOUS, TX					
LITTLE VINCE BAYOU - 0.7 TO MILE 2.7	JUL 83	6420	500	2770	3150
RR BRIDGES (LITTLE VINCE) STA 30+00N, 30+20S	JUL 83	122	122	0	0
***** PROJECT TOTAL		6542	622	2770	3150
***** DIVISION TOTAL FOR SOUTHWESTERN		52207	4937	29299	17971
******************** GRAND TOTAL ALL DIVISIONS		233929	20933	109908	102768

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

LOWER MISS VALLEY DIVISION

PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
CHANNEL IMPROVEMENT				
KEWES PT	JUN 84	600	600	0
LELAND BAR	OCT 83	1200	800	400
PORTER LAKE	JUN 84	1000	1000	0
STONE BANK PAVING	AUG 84	2500	10	2490
***** PROJECT TOTAL		5300	2410	2890
CLARENCE CANNON				
LAKE BUOYS	OCT 83	420	285	135
***** PROJECT TO[illegible]		420	285	135
EAST ST. LOUIS				
PUMPING PLANTS	OCT 83	7105	1619	5486
***** PROJECT TOTAL		7105	1619	5486
LAKE PONCHARTRAIN				
CITRUS LKFRT LV INNC - PARIS RD PBD	APR 84	12073	6819	5254
INNC E&W CAPPING FLOODWALL	OCT 83	350	350	0
MANDEVILLE SEAWALL	JAN 84	1125	800	325
STA 278-355 2ND LIFT	JAN 84	1195	1195	0
***** PROJECT TOTAL		14743	9164	5579
LAROSE TO GOLDEN MEADOW				
SECT F LV 1ST LIFT	JUN 84	2780	200	2580
***** PROJECT TOTAL		2780	200	2580

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION — LOWER MISS VALLEY DIVISION

PROJECT NAME: DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
LOCK & DAM 26				
DAM 2ND STG	MAY 84	41800	2675	39125
LOCK	MAY 84	358140	21193	336947
***** PROJECT TOTAL:		399940	23868	376072
MCGEE CREEK				
LOWER FLANK LW UPPER ST	OCT 83	2122	1495	627
***** PROJECT TOTAL:		2122	1495	627
MISS R BTW OHIO MO REG WORK				
DIKES MI. 158-136 & 126-124	FEB 84	860	469	391
***** PROJECT TOTAL:		860	469	391
MISSISSIPPI RIVER LEVEES				
ALGIERS POINT PH II M-94.3R	APR 84	128	128	0
CAIRO, IL BERM	JUL 84	1000	200	800
LAMBETHVILLE, AR BERM	MAR 84	2590	430	2160
NASH, MO RELIEF WELLS	MAR 84	3602	1200	2402
***** PROJECT TOTAL:		7320	1958	5362
NEW ORLEANS TO VENICE:				
LW FINAL ENLGT STA 0-170	MAR 84	1850	700	1150
***** PROJECT TOTAL:		1850	700	1150
OLD RIVER, LA				
AUX STR I/F & O/F CHANNEL	APR 84	35108	5400	29708
***** PROJECT TOTAL:		35108	5400	29708

OUACHITA & BLACK RIVERS				
BEAUTIFICATION & LANDSCAPING (CALION)	OCT 83	204	204	0
***** PROJECT TOTAL		204	204	0
RED RIVER WATERWAY				
DARROW REAL. & STAB. M123.5 (POOL 2)	JUL 84	10800	375	10425
ENGLAND REAL. & STAB. M110.5-112 (POOL 2)	JUN 84	7060	1018	6042
LURRAN LAKE REAL. & STAB. M-36.2 (POOL 1)	NOV 83	9030	2120	6910
MARTEAU REAL. & STAB. M116-121 (POOL 2)	JUL 84	10890	405	10485
MENDE REAL. & STAB. M119.8 (POOL 2)	DEC 83	7010	1485	5525
PHILIP BAYOU REAL. & STAB. M105-109 (POOL 2)	JUN 84	10000	476	9524
POINTFIELD REAL. & STAB. (POOL 2)	JUN 84	14800	775	14025
RAVEN CAMP REAL. & STAB. M135-138 (POOL 2)	DEC 83	7630	1512	6118
***** PROJECT TOTAL		77220	8166	69054
ST. FRANCIS RIVER & TRIBS.				
HY 18 BR ST LAKE OUT BELLE FTN	MAR 84	1961	80	1881
ITEM 2 DITCH 19, PAR 3	FEB 84	621	400	221
***** PROJECT TOTAL		2582	480	2102
WOOD RIVER DRAINAGE AND LEVEE DISTRICT				
RELIEF WELLS	NOV 83	110	110	0
***** PROJECT TOTAL		110	110	0
YAZOO BASIN TRIBUTARIES				
3 PIPE LINES MID VAL PL ITEM 5	DEC 83	330	330	0
ASCALMORE-TIPPO & OPPOSUM BYS 3 TALLAHAT. CO. BR IT 5	APR 84	7723	400	7323
CHANNEL ITEM NO 2-D	MAY 84	4187	1350	2837
TALLAHATCHIE CO. BR ITEM 5	APR 84	1202	755	447
***** PROJECT TOTAL		13442	2835	10607
***** DIVISION TOTAL FOR LOWER MISS VALLEY		571106	59363	511743

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME: DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
MISSOURI RIVER DIVISION				
CHATFIELD LAKE, CO				
CHANNEL STAGE 3	SEP 84	2922	30	2892
***** PROJECT TOTAL		2922	30	2892
HARRY S. TRUMAN DAM & RESERVOIR, MO				
RECREATION FAC - BERRY BEND AREA	JUN 84	5420	400	5020
RECREATION FAC - SHAWNEE BEND, BLEDSOE FERRY & THIBOUT PT AR	JUL 84	3430	145	3285
***** PROJECT TOTAL		8850	545	8305
LITTLE BLUE RIVER LAKES, MO				
WOODS CHAPEL ROAD PHASE II	FEB 84	5139	400	4739
***** PROJECT TOTAL		5139	400	4739
LITTLE SIOUX RIVER, IA				
CHANNEL - RECONSTRUCT CONTROL SILL	AUG 84	4087	295	3792
***** PROJECT TOTAL		4087	295	3792
***** DIVISION TOTAL FOR MISSOURI RIVER		20998	1270	19728
NORTH ATLANTIC DIVISION				
DELAWARE COAST PROTECTION, DE				
PERIODIC NOURISHMENT	MAR 84	600	600	0
***** PROJECT TOTAL		600	600	0

EAST ROCKAWAY TO ROCKAWAY INLET & JAMAICA				
PERIODIC NOURISHMENT	MAY 84	9900	6100	3800
***** PROJECT TOTAL		9900	6100	3800
NEW YORK HARBOR				
STATEN ISLAND CONTRACT 1	NOV 83	2000	1400	600
***** PROJECT TOTAL		2000	1400	600
***** DIVISION TOTAL FOR NORTH ATLANTIC		12500	8100	4400
BASSETT CREEK, MN		NORTH CENTRAL		DIVISION
DOWNSTREAM REACH	JUL 84	14821	60	14761
UPSTREAM RELOCATIONS 43(MCO	MAR 84	3465	336	3129
***** PROJECT TOTAL		18286	396	17890
DAVENPORT, IA				
STG II PUMPING PLANT	APR 84	3910	980	2930
STG III LEVEES & FLOODWALLS	JUL 84	5200	350	4850
***** PROJECT TOTAL		9110	1330	7780
ELLECOTT CREEK,NY				
STAGE I RELOCATIONS	JUL 84	1210	410	800
***** PROJECT TOTAL		1210	410	800
IWW, BRANDON ROAD L&D, IL				
REHABILITATE ELEC. SYST. & MITER GATES (MCO	MAY 84	975	157	818
RESURFACING OF LOCK & REHABILITATION OF LOCK GATES (MCO	JAN 84	9093	5023	4070
***** PROJECT TOTAL		10068	5180	4888
IWW, LOCKPORT L&D, IL				
RESURFACE & STABILIZE LOCKWALLS	FEB 84	6550	1800	4750
***** PROJECT TOTAL		6550	1800	4750

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	NORTH CENTRAL CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	DIVISION BALANCE TO COMPLETE ($000)
MANKATO & NORTH MANKATO, MN				
MAIN STREET BRIDGE	OCT 83	20132	2805	17327
***** PROJECT TOTAL		20132	2805	17327
MILAN, IL				
STAGE IV, BEAUTIFICATION	APR 84	390	110	280
STG IIIC LEVEES	NOV 83	3190	550	2640
***** PROJECT TOTAL		3580	660	2920
POINT PLACE, OH				
PUMP PLANT (OTTAWA R) (MC)	MAR 84	4035	1862	2173
***** PROJECT TOTAL		4035	1862	2173
PRESQUE ISLE PENINSULA, ERIE, PA				
BEACH NOURISHMENT	MAR 84	1770	1770	0
***** PROJECT TOTAL		1770	1770	0
ROCKFORD, IL				
CLEANOUT OF LEVINGS LAKE & SOUTH BRANCH	FEB 84	1874	1120	754
***** PROJECT TOTAL		1874	1120	754
WATERLOO, IA				
STAGE VG, WATERLOO RR BR	FEB 84	2620	550	2070
STAGE VG, WATERLOO RR BR	JAN 84	306	100	206
***** PROJECT TOTAL		2926	650	2276

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WINONA, MN

        REACH E-3 CHANNELS & UTILITIES                              MAR 84         2860      980     1880

*****  PROJECT TOTAL                                                               2860      980     1880

*****  DIVISION TOTAL FOR             NORTH CENTRAL                               82401    18963    63438


CHENA RIVER LAKES                                                  NORTH PACIFIC           DIVISION

        DAMS & APPURTEN. STRUCT./MECHAN ADDITIONS                   OCT 83          250      250        0
        DAMS & APPURTENANCES DEBRIS CONTROL                         JAN 84         1000      500      500
        LEVEES & DRAINAGE LEVEE ACCESS CONTROL                      MAY 84          100      100        0
        LEVEES & DRAINAGE STAGE CONSTRUCTION 3                      JAN 84         1660      500     1160
        LEVEES & DRAINAGE- LEVEE PROTECTION                         DEC 83        60694     2699    57995

*****  PROJECT TOTAL                                                              63704     4049    59655

CHIEF JOSEPH ADDITIONAL UNITS

        REC FACIL BRIDGEPORT STATE PARK PHASE II                    DEC 83         1900     1400      500

*****  PROJECT TOTAL                                                               1900     1400      500

DWORSHAK DAM & RESERVOIR

        RECREATION FACILITIES - THREE MEADOWS GROUP CAMP            MAR 84          697      583      114
        ROAD - FREEMAN CREEK - ROAD COMPLETION 5.5 MI               MAR 84         1673     1673        0

*****  PROJECT TOTAL                                                               2370     2256      114

JOHN DAY LOCK & DAM

        FISH & WILDLIFE FAC - OUTFALL STRUCTURE & COLLECT CH        APR 84        13437     3087    10350

*****  PROJECT TOTAL                                                              13437     3087    10350

LOWER COLUMBIA RIV BASIN BANK PROTECTION, OR & WA

        BANK STABILIZATION JANICE, WARIS, ELLENDER & COLUMBIA SLOUGH  JUL 84       1500      855      645

*****  PROJECT TOTAL                                                               1500      855      645

LOWER SNAKE F & WL COMPENSATION

        F & WL FACIL - IRRIGON SAT FAC TRAP SPW & ACC (LITTLE SHEEP  JAN 84         750      300      450
        F & WL FACIL - IRRIGON HOUSING                               APR 84         276      276        0
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NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

8044: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	NORTH PACIFIC CONTRACT AMOUNT ($000)	 FY 1984 REQ'MT ($000)	DIVISION BALANCE TO COMPLETE ($000)
F & WL FAC. - LYONS FERRY SAT TRAP SPAWN FACS PH II	JUL 84	2651	151	2500
F & WL FACIL - CRYSTAL SPRINGS STEELHEAD HATCHERY ID	MAY 84	7880	324	7556
F & WL FACIL - IRRIGON STEELHEAD HATCHERY	OCT 83	8601	3100	5501
F & WL FACIL - SAWTOOTH ID HOUSING	MAR 84	291	291	0
F & WL FAC. - LYONS FERRY SAT REAR FAC. PH I - WAITSBURG	JUN 84	650	150	500
***** PROJECT TOTAL		21129	4622	16507
MILL CREEK LAKE, WA				
CHANNELS & CANALS - T. S. BOON	JUN 84	214	196	18
CHANNELS & CANALS - YELLOWHAWK DIVERSION	MAR 84	733	479	254
***** PROJECT TOTAL		947	675	272
STRUBE LAKE & COUGAR ADDITIONAL UNIT				
ROAD 163D & KING RD.	SEP 84	1850	50	1800
***** PROJECT TOTAL		1850	50	1800
WILLAMETTE RIVER BASIN BANK PROTECTION				
BANK STABILIZATION WATTS LOCATION	JUN 84	840	540	300
***** PROJECT TOTAL		840	540	300
WILLOW CREEK LAKE HEPPNER				
RECL FACILITIES PARKING, COMFORT STA. GROUNDS & BOAT RAMP	MAR 84	190	190	0
***** PROJECT TOTAL		190	190	0
***** DIVISION TOTAL FOR NORTH PACIFIC		107867	17723	90143

	OHIO RIVER		DIVISION	
BIG SOUTH FORK, KY & TN				
BLUE HERON GROUP CAMP	JUL 84	2280	285	1995
BLUE HERON ACCESS ROAD & RECREATION FACILITY	JUL 84	8166	300	7866
***** PROJECT TOTAL		10446	585	9861
BURNSVILLE LAKE, WV				
SEED AND REFOREST	OCT 83	490	490	0
***** PROJECT TOTAL		490	490	0
LEVISA & TUG FORKS-BIG SANDY RIV & UPPER CUMBERLAND RIV				
BARBOURVILLE CUTOFF	JUL 84	8800	390	8410
PINEVILLE INTERIM PREPARATION	JUL 84	1775	300	1475
PINEVILLE - PINE ST BRIDGE	OCT 83	500	300	200
***** PROJECT TOTAL		11075	990	10085
MILL CREEK, OH				
CHANNEL & LEVEE, SEC 8	APR 84	21110	1100	20010
RR BRIDGE, SEC 5	MAY 84	2010	500	1510
RR BRIDGE, SEC 3, 3&3 4-6	OCT 83	2466	1400	1066
***** PROJECT TOTAL		25586	3000	22586
MONTGOMERY LOCKS & DAM, PA				
LOCKS & DAM REHAB.	AUG 84	16260	500	15760
MITER GATES	DEC 83	3600	2200	1400
***** PROJECT TOTAL		19860	2700	17160
MUSKINGUM RIVER LAKES, OH (REHAB)				
WILLS CREEK RELIEF WELLS	JUN 84	1150	300	850
***** PROJECT TOTAL		1150	300	850
PAINTSVILLE LAKE, KY				
BUILDINGS, GROUNDS & UTILITIES	OCT 83	1025	500	525

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME: DESCRIPTION OF WORK	EST AWARD DATE	OHIO RIVER CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	DIVISION BALANCE TO COMPLETE ($000)
RECREATION	MAY 84	5250	650	4600
***** PROJECT TOTAL:		6275	1150	5125
R. D. BAILEY LAKE, WV				
SEED & REFOREST	OCT 83	1085	780	305
***** PROJECT TOTAL:		1085	780	305
SOUTHWESTERN JEFFERSON COUNTY, KY				
LAKE GAS PIPELINE SEC 5	JAN 84	238	238	0
***** PROJECT TOTAL:		238	238	0
STONEWALL JACKSON LAKE, WV				
DAM CONSTRUCTION	JAN 84	23812	3300	20512
ROANOKE BAY MAINTENANCE COMPLEX	APR 84	1870	500	1370
RR TRACK RELOCATION	APR 84	3655	700	2955
RR TRACK AND COMMUNICATION LINES RAISE	APR 84	900	200	700
W. FORK DAM BUILDINGS	APR 84	2450	300	2150
WV RTS. 44 & 60 RELOCATIONS	APR 84	6100	1100	5000
WV RT. 30 SEC 2 RELOCATION	APR 84	10500	2700	7800
WV RT. 30 SEC 3 RELOCATION	APR 84	12450	1300	11150
***** PROJECT TOTAL:		61737	10100	51637
***** DIVISION TOTAL: FOR OHIO RIVER		137982.	20333	117649
		SOUTH ATLANTIC		DIVISION
B. EVERETT JORDAN DAM AND LAKE:				
FISH & WILDLIFE FACILITIES	MAY 84	4011	500	3511
OUTLET GATE ACCESS RAMP	FEB 84	170	170	0
PARKERS CREEK RECREATION AREAS AND BEACH	OCT 83	6969	3851	3118
RIVS JUNC., VISTA PT., FARRINGTN, BELLS LAND, FORREST REC	OCT 83	1803	1431	372
***** PROJECT TOTAL:		12953	5952	7001

CENTRAL AND SOUTHERN FLORIDA				
KISSIMMEE RIVER BAFFLE BLOCKS & RIPRAP				
PORT MAYACA RECREATION	OCT 83	732	732	0
UPPER ST. JOHN'S LEVEE GAPS	JUL 84	873	50	823
	APR 84	707	120	587
***** PROJECT TOTAL		23[illegible]	902	1410
COOPER RIVER				
EMERGENCY BY-PASS	MAR 84	1738	188	1550
***** PROJECT TOTAL		1738	188	1550
DUVAL COUNTY, FL				
RENOURISHMENT OF SECTIONS 1 & 2	APR 84	3050	1350	1700
***** PROJECT TOTAL		3050	1350	1700
FALLS LAKE				
FISH AND WILDLIFE SUBIMPOUNDMENTS	AUG 84	798	100	698
RESOURCE MANAGEMENT FACILITIES	NOV 83	678	678	0
ROLLING VIEW RECREATION AREA	MAY 84	8770	1210	7560
STATE O&M FACILITIES AND RECREATION AREA	JUL 84	1393	342	1051
***** PROJECT TOTAL		11639	2330	9309
FOUR RIVER BASINS				
FLATWOODS SITE RECREATION AREA	MAR 84	1589	1000	589
FLINT CREEK CANAL IMPROVEMENTS	AUG 84	440	140	300
***** PROJECT TOTAL		2029	1140	889
PINELLAS COUNTY				
LONG KEY RENOURISHMENT AND PASS - A-GRILLE GROIN EXTENSION	JAN 84	600	600	0
***** PROJECT TOTAL		600	600	0
PORTUGUES & BUCANA RIVERS, PR				
CERRILLOS DAM	DEC 83	87869	11169	76700
CERRILLOS RESERVOIR CLEARING	DEC 83	634	200	434
PORTUGUES DEBRIS BASIN	FEB 84	10003	2150	7853
RELOCATIONS FOR RECREATION AREA	JUL 84	484	40	444
UPPER PORTUGUES CHANNEL SECTION 6D	SEP 84	2545	0	2545
***** PROJECT TOTAL		101535	13559	87976

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
		SOUTH ATLANTIC		DIVISION
RANDLEMAN LAKE, NC				
STATE ROAD 1921 RELOCATION	JUL 84	3046	400	2646
U.S. 220 ROAD RELOCATION	MAR 84	2740	1466	1274
***** PROJECT TOTAL		5786	1866	3920
RICHARD B. RUSSELL DAM & LAKE				
ADMINISTRATION & OPERATION ROADS	JUN 84	1839	101	1738
PUMP STORAGE GENERATORS	JUN 84	22395	127	22268
SOUTH CAROLINA ACCESS ROADS TO RECREATION FACILITIES	APR 84	1900	1900	0
***** PROJECT TOTAL		26134	2128	24006
TENNESSEE-TOMBIGBEE WATERWAY				
COLUMBUS - AREA OFFICE	MAR 84	3450	1215	2235
DIVIDE CUT - EROSION CONTROL FY 84	OCT 83	1940	1940	0
LOCK B - CUTOFF B-3	APR 84	870	435	435
LOCK D - TOMBIGBEE EPA	OCT 83	140	140	0
LOCK C - CUTOFF AND CLEARING	APR 84	3290	1100	2190
***** PROJECT TOTAL		9690	4830	4860
TOMBIGBEE RIVER AND TRIBUTARIES				
INTERIM MEASURES	JUL 84	1130	771	359
***** PROJECT TOTAL		1130	771	359
***** DIVISION TOTAL FOR SOUTH ATLANTIC		178596	35616	142980
		SOUTH PACIFIC		DIVISION
BODEGA BAY, CA				
CHANNEL DREDGING AND BREAKWATER A1	NOV 83	3080	2910	170
FISH & WL MITIGATION (EEL GRASS)	NOV 83	190	125	65
***** PROJECT TOTAL		3270	3035	235

CUCAMONGA CREEK, CA				
CUCAMONGA CREEK&DEMENS CREEK CHAN. (EROSION CONTROL-PART 2)	JUL 84	2311	846	1465
***** PROJECT TOTAL		2311	846	1465
DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA				
ADMIN AND OPERATIONS FACILITY	MAR 84	877	877	0
BANK STABILIZATION - PHASE III	JUL 84	1694	800	894
FISH & WILDLIFE FENCING	JUN 84	729	128	601
FISH & WILDLIFE TREE PLANTING	MAR 84	195	45	150
PERMANENT OPERATING EQUIPMENT	DEC 83	1011	420	591
RESERVOIR TREE PLANTING	MAR 84	1005	248	757
RESERVOIR FENCING	JUN 84	1985	417	1568
RESERVOIR CHECK DAMS	APR 84	145	45	100
***** PROJECT TOTAL		7641	2980	4661
FAIRFIELD VICINITY STREAMS, CA				
MCCOY CREEK CHANNEL - BELOW HIGHWAY 12	JUL 84	100	100	0
***** PROJECT TOTAL		100	100	0
LOS ANGELES COUNTY DRAINAGE AREA, CA (LOS ANGELES RIVER)				
LOW FLOW CHANNEL & SUBDRAIN (ARROYO SECO CH. TO N. MAIN ST)	MAY 84	5500	1909	3591
LOW FLOW CHANNEL & SUBDRAIN (UPRR TO 4TH ST)	MAY 84	7300	2500	4800
***** PROJECT TOTAL		12800	4409	8391
MERCED COUNTY STREAMS, CA				
BEAR LAKE - MAIN DAM 305 CONTRACT	JUN 84	30230	3900	26330
BEAR DAM - BOUNDARY SURVEYS	JAN 84	140	140	0
CASTLE LAKE-MAIN DAM 406 CONTRACT	OCT 83	4465	3045	1420
***** PROJECT TOTAL		34835	7085	27750
NEW MELONES LAKE, CA				
ADMIN FACILITIES - LOWER STANISLAUS	NOV 83	1050	1050	0
BOUNDARY FENCING	APR 84	780	480	300
GLORY HOLE AND ANGEL CREEK RECREATION AREA	APR 84	3580	1040	2540
MINIMAL RECREATION FACILITIES - LOWER STANISLAUS	APR 84	880	400	480
RESERVOIR CLEARING PHASE 2 PART 2	OCT 83	1500	1500	0
TUTTLETOWN & OTHER RECREATION AREAS	APR 84	2640	1200	1440
***** PROJECT TOTAL		10430	5670	4760

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	SOUTH PACIFIC EST AWARD DATE	CONTRACT AMOUNT ($000)	DIVISION FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
SACRAMENTO RIVER & MAJOR AND MINOR TRIBUTARIES, CA				
BYPASS LEVEE REVET NO. 10	JUN 84	185	185	0
***** PROJECT TOTAL		185	185	0
SAN FRANCISCO BAY TO STOCKTON, CA				
JERSEY ISLAND TO NEW YORK SLOUGH	JUL 84	1700	200	1500
***** PROJECT TOTAL		1700	200	1500
SAN JACINTO RIVER LEVEE & BAUTISTA CREEK CHANNEL, CA				
BAUTISTA CREEK CHANNEL	MAR 84	3893	3893	0
***** PROJECT TOTAL		3893	3893	0
SAN LUIS REY RIVER, CA				
LEVEE, I-5 TO OCEAN	MAY 84	550	550	0
***** PROJECT TOTAL		550	550	0
SURFSIDE-SUNSET AND NEWPORT BEACH, CA				
BEACH REPLENISHMENT STAGE 9	AUG 84	7647	5135	2512
***** PROJECT TOTAL		7647	5135	2512
WALNUT CREEK, CA				
SAN RAMON BYPASS AND WALNUT CREEK CHANNEL	JUN 84	20200	3900	16300
***** PROJECT TOTAL		20200	3900	16300
***** DIVISION TOTAL FOR SOUTH PACIFIC		105562	37988	67574

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

SOUTHWESTERN DIVISION

PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT ($000)	FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
ARCADIA LAKE, TX				
LT. ABUTMENT ACCESS RD. & PROJ. BLDG. & OVERLOOK	DEC 83	1450	781	669
PLUG OIL & GAS WELLS	DEC 83	213	190	23
PUBLIC USE AREAS, STAGE I	JAN 84	357	318	39
PUBLIC USE AREAS, STAGE II	SEP 84	9537	0	9537
***** PROJECT TOTAL		11557	1289	10268
CORPUS CHRISTI BEACH, TX (RESTORATION)				
BEACH REPLENISHMENT	FEB 84	920	920	0
***** PROJECT TOTAL		920	920	0
CORPUS CHRISTI SHIP CHANNEL				
CONSTRUCT RETAINING WORKS FOR DREDGE MATERIALS (SUNTIDE AREA	NOV 83	7100	1362	5738
***** PROJECT TOTAL		7100	1362	5738
EL DORADO LAKE, KS				
FENCING	OCT 83	720	720	0
***** PROJECT TOTAL		720	720	0
EL PASO, TX				
BORDERLAND AND HIGHWAY DIVERSIONS	JAN 84	8821	2603	6218
***** PROJECT TOTAL		8821	2603	6218
JOE POOL LAKE				
DPSL ELEC LAKE AREA	OCT 83	292	292	0
REC FAC (MINIMUM)	APR 84	453	150	303
ROAD 661	DEC 83	1957	1957	0
STATE RECREATION FACILITIES	APR 84	11514	2400	9114
***** PROJECT TOTAL		14216	4799	9817
MCCLELLAN-KERR AR R NAV SYSTEM, LOCKS & DAMS				
HULABEND CLOSURE STRUCTURE	OCT 83	829	829	0

NEW CONTRACT AWARDS SCHEDULED FOR FISCAL YEAR 1984—Continued

[Contract amounts equal or greater than $100,000]

CORPS DIVISION,PROJECT DESCRIPTION,LINE ITEM DESCRIPTION PROJECT NAME DESCRIPTION OF WORK	EST AWARD DATE	SOUTHWESTERN CONTRACT AMOUNT ($000)	DIVISION FY 1984 REQ'MT ($000)	BALANCE TO COMPLETE ($000)
***** PROJECT TOTAL		829	829	0
RAY ROBERTS LAKE				
BOUNDARY FENCING PT IV	APR 84	1765	435	1330
CEMETERIES PT I	JUL 84	259	100	159
MOPAC RAILROAD	JUL 84	10802	300	10502
ROAD A	AUG 84	17859	200	17659
U.S. HIGHWAY 377	MAY 84	6838	269	6569
***** PROJECT TOTAL		37523	1304	36219
SAN ANTONIO CHANNEL IMPROVEMENT, TX				
EXCAV., WALLS, & EROSION CONTROL - UNIT 5-4	MAY 84	9166	763	8403
***** PROJECT TOTAL		9166	763	8403
SKIATOOK LAKE, OK				
FENCING	OCT 83	1412	749	663
PLUG OIL & GAS WELLS STAGE II	APR 84	356	356	0
RT. ABUTMENT ACCESS ROAD AND COMPLETE EMBANKMENT	OCT 83	1513	954	559
TALL CHIEF COVE RECREATION AREA	OCT 83	1763	1763	0
***** PROJECT TOTAL		5044	3822	1222
VINCE AND LITTLE VINCE BAYOUS, TX				
LITTLE VINCE BAYOU - 0.0 TO MILE 0.7	DEC 83	627	627	0
***** PROJECT TOTAL		627	627	0
***** DIVISION TOTAL FOR SOUTHWESTERN		96523	19038	77485
********************* GRAND TOTAL ALL DIVISIONS		1313495	218395	1095100

STATUS OF SURVEY REPORTS

Question. The committee would like you to provide, for the record, a complete status in chart and summary form of the various stages of review of all survey reports beginning with the division engineers' notice date through the date the report is submitted to Congress.

Answer. A complete status in chart and summary form of the various stages of review of reports currently at the Washington follows:

WASHINGTON LEVEL REPORTS

SUMMARY OF FEASIBILITY REPORT REVIEW STATUS

	Recommending Federal action	Not recommending Federal action
With/BERH	16	13
With/OCE	28	23
With/ASA(CW)	89	3
With/Congress	[1] 22	NA

[1] No detailed list attached.

31 JANUARY 1983

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

		w/ BERH	w/ OCE						w/ ASA(CW)					
REPORT NAME BY DIVISION	TYPE	DATE OF DIV CDR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG	DATE OF ST CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB	OMB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
LMV														
White River Navigation to Batesville, AR	NAV	28Sep79	23Jul80	24Jul80	9Jan81	9Apr81	2Apr81	23Dec81	26Jan82					
Lake Pontchartrain, North Shore, LA	NAV S°	28Mar77	17Jan78	17Jan78	17Apr78	7Aug78	·27Jul78	14Feb79	9Mar79					
Mississippi Rvr Ship Channel, Gulf to Baton Rouge, LA	NAV	30Oct81	9Mar82	1Apr82	8Jun82		3Sep82							
Maline Creek, MO	FDP	13Mar81	8Mar82	5Apr82	4Jun82	16Jun82	10Aug82	2Nov82	5Nov82					
St. Louis Harbor, MO & IL	NAV	29Nov82												Sch for BERH Mtg No 1/83
Cape Girardeau, Metro, MO	FDP	3Jan83												
MRC														
Eight Mile Creek, AR	FDP	3Jun77	24May77	24May77	19Jan79	27Apr79	30May79	10Aug79	16Aug79					
Helena and Vicinity, AR	FDP	15Oct82	16Dec82	16Dec82	12Jan83									
Phillips Co, (Helena Harbor), AR	NAV	7Mar78	7Mar78	7Mar78	29Nov79	11Mar80	15May80	17Oct80	23Oct80					
West Kentucky Trib Project Obion Cr, KY, Miti Plan	F&WL	14May76	14May76	14May76	17Jan79	6Mar79	18Apr79	16Sep80	24Sep80					
Atchafalaya Basin Floodway System, LA	FDP	15Jan82	19Apr82	20Apr82	30Jul82	26Oct82	18Nov82							
Bushley Bayou, Red River, LA (PHI)	FDP	18Aug78	17Aug78	17Aug78	9Mar79	28Aug79	8Jun79	30Apr80	6May80					Supl COE RPT 12Aug82 went to SA for OMB 31Aug82

Louisiana State Penitentiary, Miss. River, LA	FDP	28Jan82	19Apr82	19Apr82	23Jul82	3Nov82	10Nov82	10Dec82	20Dec82		
St. Johns Bayou & New Madrid Floodway, MO (PHI)	FDP	29Sep80	29Jan82	29Jan82	14Jul82	8Oct82	27Sep82	4Jan83			
Greenville Harbor, MS (PHI)	NAV	3Mar76	3Mar76	3Mar76	18Apr77	25Apr77	16Jun77	15Nov77	18Nov77	9Jun78	Supl Ch Rpt 22Feb82 went to SA for OMB 18Mar82
Vicksburg Harbor, MS	NAV	13Sep76	13Sep76	13Sep76	1Dec77	4Apr78	7Mar78	13Aug79	29Aug79		
Yazoo River Mitigation, MS	F&WL	16Aug82	16Dec82	16Dec82							
Memphis Harbor, TN	NAV	30Jun77	24May77	24May77	7Jan80	30Sep80	15May80	25Feb81	4Mar81		
Horn Lake Creek, TN & MS (PHI)	FDP	31Aug81	28Jan82	28Jan82	8Jul82	2Sep82	6Oct82	4Jan83	31Jan83		
Nonconnah Creek, TN & MS (PHI)	FDP	28Sep81	28Jan82	28Jan82	16Jul82	23Aug82	23Sep82	23Dec82	30Dec82		
MRD											
Metro Denver & S. Platte Rvr & Tribs, CO, WY & NE	FDP	9Jul80	18Feb81	27Mar81	5May81	4Sep81	30Jul81	23Dec81	12Jan82		
Perry Creek, IA	FDP	12Jan81	13May81	29Jun81	23Jul81	10Dec81	30Oct81	29Jan82	10Feb82		
Missouri Rvr Bank Stab & Nav Proj, IA, NE, MO, KS - Miti	F&WL	15Jun81	2Sep82	30Sep82	18Nov82	12Jan83	21Jan83				
Brush Creek & Tribs, MO & KS	FDP	20Nov80	8Mar81	1Apr82	22Apr82	30Apr82	23Jun82	3Jan83			
Downstream Measures at Harry S. Truman Dam & Res, MO	F&WL	17Nov80	18Feb81	16Mar81	24Apr81	25Aug81	17Jul81	21Dec81	11Jan82		
Gregory Co Hydroelectric Pumped Storage Fac, SD	MP	16Jun82	2Sep82	22Sep82	15Oct82	13Jan83	14Jan83				
NAD											
Atlantic Coast of MD & Assateague, Is, VA	SP	16Oct80	19Feb81	31Mar81	22Apr81	2Jul81	28Apr81	29Sep81	15Oct81		
Barnegat Inlet, NJ (PHI)	NAV	4Nov81	8Mar82	9Apr82	16Jun82	29Sep82	3Sep82	20Jan83			
Cape May Inlet to Lower Township, NJ (PHI)	SP	8Oct80	13May81	29Jun81	28Jul81	8Sep81	28Oct81	23Dec81	20Jan82		

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

		w/ BERH	w/ OCE						w/ ASA(CW)					
REPORT NAME BY DIVISION	TYPE	DATE OF DIV CDR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG	DATE OF ST. CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB	OMB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
NAD														
Raritan River Basin, Green Brook), NJ	FDP	6Oct80	18Feb81	16Mar81	23Apr81	28Jul81	17Jul81	4Sep81	18Sep81					
Gowanus Creek, Channel, NY	NAV	27Nov81	9Mar82	5Apr82	5May82	4Aug82	27Jul82	14Sep82	27Sep82					
Kill Van Kull, Newark Bay Channels, NY & NJ	NAV	3Oct80	13May81	10Jun81	7Jul81	10Nov81	19Oct81	14Dec81	23Dec81					
Westchester Co Strs, NY& Byram Rvr Bsn, CT	FDP	30Mar78	21Jun78	12Jul78	23Aug78	23Oct78	2Jan79	4Apr79	9Apr79					
Hudson River Water Supply, NY	WS	11Nov77	26Jan78	26Jan78	8Jun78			26Mar79	4Apr79					Recommends PHI
Harrisburg, PA	FDP	7Dec77	21Jun78	21Jun78	31Aug78	31Oct78	30Nov78	16May79	23May79					
Lock Haven, PA (PHI)	FDP	21Sep80	19Feb81	14Apr81	12May81	1Jun81	18Aug81	14Dec81	7Jan82					
Wyoming Valley, PA (PHI)	FDP	18Feb82	2Sep82	1Nov82	8Dec82	7Jan83								
Hampton Roads Drift Removal, VA	NAV	13Aug82	14Dec82	19Jan83										
Richmond, VA (PHI)	FDP	2Feb81	13May81	11Jun81	1Jul81	25Sep81	25Sep81	16Nov81	4Dec81					
Norfolk Harbor & Channels, VA	NAV	29Aug80	19Nov80	21Jan81	3Mar81	15May81	17Jul81	20Nov81	4Dec81	25May82	15Dec82	20Jan83		
NCD														
Mississippi Rvr - Green Bay L&DD No. 2, IA	FDP	2Nov79	3Apr80	23Sep80	21Oct80	9Mar81	16Jan81	21Oct81	10Nov81					
Muscatine Is. Levee Dist. & Louisa Co, Drain No. 13, IA	FDP	15Aug75	9Dec75	9Dec75	3Aug76	4Nov76	17Jan77	22Jul77	3Aug77*					Ret'd to OCE 25Mar80 for further study

Rock River at Rockford (Loves Park #1), IL	FDP	9Apr79	14Nov79	2Jan80	29Feb80	27May80	6Jun80	15Sep80	24Sep80		
Hydropower at Brandon Road, L&D, IL	HP	30Jul82	15Dec82	18Jan83							
Hydropower at Dresden Dam, IL	HP	30Jul82	15Dec82	18Jan83							
South Quincy D & LD, IL	FDP	5Nov82									Sch for BERH Mtg No 1/83
Indiana Shoreline, IN	SP	10Sep82	14Dec82	28Jan83							
Little Calumet River, IN (PMI)	FDP	12Oct82									Sch for BERH Mtg No 1/83
Grand Haven Harbor, MI	NAV	5Dec77	6Apr78	30Jun78	22Nov78	4Jun79	1Mar79	9Oct79	18Oct79	11Feb82	
Monroe Harbor, MI	NAV	21Mar80	20Nov80	22Jan81	24Feb81	3Jun81	16Jun81	25Nov81	9Dec81		
Duluth-Superior Harbor, MN &WI	NAV	5Nov82									Sch for BERH Mtg No 1/83
Mississippi Rvr, at St. Paul, MN (Sec 216)	FDP	30Apr82	2Sep82	22Sep82	14Oct82		5Jan83				
Redwood Rvr, at Marshall, MN (Sec 216)	FDP	15Oct79	18Feb81	16Mar81	22Apr81	24Jun81	30Jul81	16Nov81	25Nov81		
Olcott Harbor, NY	NAV	24Jan79	31Jul79	21Aug79	24Sep79	18Dec79	25Jan80	11Jun80	30Jun80		
Buffalo Metro Area, NY (Tonawanda Ck)	FDP	30Jul82									Sch for BERH Mtg No 2/83
Ellicott Cr Bsn, NY (SPAC)	FDP	11Jan78	6Apr78	20Jul78	29Aug78	1Dec78	8Dec78	2Apr79	6Apr79	12Feb82	Auth 29Dec81. Propose to xmit for info only
Presque Isle Peninsula, PA (PMI)	SP	31Jul80	19Nov80	29Jun81	27Feb81	17Apr81	26May81	2Oct81	27Oct81		
NED											
New Haven Harbor, CT	NAV	20May81	9Sep81	15Oct81	24Nov81	19Feb82	4Feb82	26Jul82	18Aug82		
Quincy Coastal Strms, Town Brook, MA	FDP	29Sep80	18Feb81	18Mar81	16Apr81	1Oct81	17Jul81	14Dec81	8Jan82		
Roughans Point, Revere, MA	FDP	3Jan83									Sch for BERH Mtg No 2/83
Big River Reservoir, RI	FDP	3Aug81	9Mar82	5Apr82	4May82	6Aug82	12Aug82				

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

REPORT NAME BY DIVISION	TYPE	w/BERH	w/OCE						w/ASA(cw)					
		DATE OF DIV CDR NOTICE	DATE OF BRH/WRC ACTION	DATE OF BRH/WRC REPORT	DATE TO ST & AG	DATE OF ST CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB	OMB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
NPD														
Bethel Bank Stabilization, AK	SP	30Jun82	14Dec82	26Jan83										
Saint Paul Island Harbor, AK	NAV	30Jun82	14Dec82	24Jan83										
Small hydroelectric plants, Scammon Bay, AK	MP	8Jun82	2Sep82	12Oct82	3Nov82		17Jan83							
South Central Railbelt, AK, Valdez INT	MP	31Aug81	8Mar81	5Apr82	20Apr82	17Jun82	6Aug82	29Oct82	2Nov82					
Lucky Peak, ID	MP	10Apr78	21Jun78	21Jun78	15Sep78	23Apr79	7Dec78	17Mar80	24Mar80	4Feb82				
Blue River Lake, OR	MP	30Jun82	2Sep82	22Sep82	3Nov82		21Jan83							
Grays Harbor, WA	NAV	15Sep82	14Dec82	17Jan83										
Wynoochee Hydro/Fish Hatchery, WA	MP	24Sep82												Sch for BERH Mtg No 1/83
Yakima-Union Gap, WA	FDP	30Nov77	21Jun78	7Nov78	20Dec78	30Mar79	20Mar79	7May80	19May80					
Bonneville Nav Lock, WA & OR	NAV	21Oct77	6Apr78	5Dec78	8Jan79	3Apr79	30Apr79	14Mar80	18Mar80					Supl Ch Rpt 10Feb81 Sent to SA 11Feb81
McNary Lock & Dam, 2nd Powerhouse, OR & WA (PHI)	MP	30Nov79	2Apr80	6May80	20Aug80	24Dec80	16Jan81	24Jun81	[illegible]					
City Waterway, Tacoma Hbr, WA	NAV	None	None	None	26Nov82									
ORD														
Fairfield, OH Int Rpt, No. 3	FDP	26Apr82	2Sep82	25Oct82	19Nov82	10Dec82								

Hocking Rvr at Logan & Nelsonville, OH	FDP	13Jan77	3May77	3May77	25Jul77	14Sep77	21Oct77	23Jun78	28Jun78		
Central Ohio, N. Chillicothe, OH	FDP	29Sep80	19Feb81	27Mar81	27Apr81	4May81	22Jun81	4Sep81	17Dec81		
Miami R, Little Miami R, Int 82, W. Carrollton-Holes, OH	FDP	23Oct80	19Feb81	13Apr81	15May81	6Jul81	29Jul81	23Dec81	11Jan82		
Cabin Creek, Kanawha Co, WV	FDP	19Aug77	17Jan78	17Jan78	25May78	1Sep78	16Oct78	1Mar79	7Mar79		
Gallipolis Locks & Dam Repl, OH & WVA (PHI)	NAV	4May81	9Sep81	15Oct81	16Dec81	2Mar82	4Mar82	8Apr82	14Apr82		
Summersville Lake Modification Study, Gauley R, WVA	MP	23Dec82									Sch for BERH Mtg No 2/83
POD											
Alenaio Stream, HI	FDP	15Jul82	14Dec82	18Jan83							
Hilo Harbor, HI	NAV	26Feb82									Sch for BERH Mtg No 1/83 1/83
Lava Flow Control, HI	FDP	30May80	19Nov80	15Dec80	17Feb81	22Apr81	10Jun81	21Jun81	24Jul81		
Wailua R, Hydro, HI	HYD	30Dec82									Sch for BERH Mtg No 2/83
SAD											
Mobile Harbor, AL	NAV	6Nov80	18Feb81	18Mar81	21Apr81	30Jun81	17Jul81	18Nov81	9Dec81		
Village Creek, AL	FDP	21Sep81	8Mar82	5Apr82	28May82	13Oct82	10Sep82	23Dec82	7Jan83		
Charlotte County, FL	SP	22Dec80	13May81	29Jun81	27Jul81	25Jan82	27Oct81	2Apr82	13Apr82		
Dade County, N. of Haulover Beach, FL	SP HUR	11Aug82	14Dec82	19Jan83							
Jacksonville Harbor, Mill Cove, FL	NAV	6Oct80	13May81	29Jun81	27Jul81	22Dec81	6Nov81	12Feb81	1Mar82		
Indian River County, FL	SP	31Oct80	18Feb81	12Mar81	11May81	10Aug81	21Aug81	21Dec81	8Jan82		
Manatee Harbor, FL	NAV	16Feb79	31Jul79	21Aug79	14Sep79	30Jan80	26Dec79	12May80	19May80	4Feb82	

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

		w/ BERH	w/ OCE						w/ ASA(CW)					
REPORT NAME BY DIVISION	TYPE	DATE OF DIV CDR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG	DATE OF ST CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB	OMB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
Monroe County, FL	SP	28Apr82												Sch for BERH Mtg No 1/83
St. Johns County, FL	SP	24Apr78	21Mar78	2Apr79	15May79	27Nov79	10Aug79	29Feb80	29Feb80					
Tampa Harbor, East Bay, FL	NAV	30Dec77	6Apr78	6Apr78	6Jul78	16Aug78	11Aug78	25Jan79	1Feb79	4Feb82	21Jan83			
Metro Atlanta W. R.M.S., GA	MP	30Mar81	9Sep81	28Oct81	9Dec81	18Feb82	30Mar82	1Jun82	17Jun82	22Oct82				
Savannah Harbor (Widening), GA	NAV	4Nov76	2Mar77	29Jun77	6Sep77	13Feb78	14Mar78	19Dec78	12Jan79	4Feb82				
Oates Creek, GA	FDP	31Dec80	13May81	29Jun81	29Jul81	19Nov81	9Nov81	23Dec81	19Jan82					
Wilmington Harbor, NE Cape Fear R, NC	NAV	8May78	14Nov79	2Jan80	24Jan80	30May80	26Jun80	16Sep80	30Sep80					
Wrightsville Beach, NC	SP	30Dec82												Sch for BERH Mtg No 1/83
San Juan Harbor, PR (PHI)	NAV	24Aug81	8Mar82	20Apr82	26May82	1Sep82	11Aug82	23Dec82	19Jan83					
Charleston Harbor, SC (PHI)	NAV	25Jun80	19Nov80	21Jan81	26Feb81	5Jun81	1Jun81	27Aug81	18Sep81					
Folly Beach, SC	SP	31Dec79	3Apr80	30Apr80	30Jun80	10Dec80	24Oct80	17Mar81	31Mar81					
Virgin Islands, Crown Bay, VI	NAV	20Oct80	13May81	10Jul81	29Jul81	16Feb82	5Nov81	9Apr82	20Apr82					
SPD														
Little Colorado Riv at Holbrook, AZ	FDP	31Dec80	13May81	29Jun81	22Jul81	28Sep81	9Oct81	23Dec81	8Jan82					
Cache Creek Basin, CA	FDP	26Oct79	3Apr80	4Jun80	2Jul80	3Sep80	22Oct80	27Apr81	15May81					

Fisherman's Wharf, CA	NAV	23Jun76	11Apr77	11Apr77	31May77	3Oct77	19Sep77	7Jun79	27Jun79		Supl Ch Rpt 3Feb78
Oakland Outer Harbor, CA	NAV	1Apr77	6Apr78	21Jun78	2Jan79	23Mar79	3May79	7Jan80	28Jan80	4Feb82	
Redbank and Fancher Creeks, CA	FDP	7Mar80	23Jul80	24Jul80	28Oct80	19Jan81	12Feb81	7May81	15May81		
Richmond Harbor, CA	NAV	4Dec81	8Mar82	5Apr82	23Apr82	30Jun82	9Jul82	8Aug82	24Sep82		
Sacramento Rvr, Deep Water Ship Channel, CA	NAV	24Oct80	18Feb81	12Mar81	10Apr81	14Jul81	21Jul81	20Nov81	9Dec81		
Sacramento Rvr Fish & Wildlife Program, CA	F&WL	13Jun80	20Nov80	29Jan81	10Mar81	29May81	26May81	1Sep81	21Sep81		Rtnd by SA 19Oct82
Santa Ana Rvr Main Stem, Incl Santiago Cr, CA	FDP	10Feb81	13May81	29Jun81	24Jul81	22Sep81	22Oct81	15Jan82	20Jan82		
Sweetwater Rvr, Recreation & Marshland Conservation, CA	F&W MIT	30Jul82									BERH Consideration deferred
Puerco Rvr & Tribs, Gallup, NM	FDP	30Nov79	19Nov80	29Jan81	26Feb81	22May81	11Jun81	4Sep81	18Sep81		
SWD											
Fourche Bayou, AR	FDP	14Jan80	20Nov80	19Jan81	26Feb81	5May81	20May81	4Sep81	28Oct81	13Oct82	
Murray Lock & Dam, (Hydropower), AR	HYD NAV	15Dec80	13May81	9Jun81	8Jul81	15Sep81	25Sep81	23Dec81	19Jan82		
Ark Rvr & Tribs, L&D 13 & 9, & Toad Suck Ferry, L&D AR & OR	MP	30Aug82	15Dec82	19Jan83							
Fountain Creek, CO (PHI)	FDP	27Jun80	19Feb81	15Apr81	18May81	8Jul81	17Jul81	23Dec81	13Jan82		
Halstead, KS (Interim)	FDP	23Dec76	29Jun77	29Jun77	19Jul77	8Dec77	26Oct77	8May79	23May79		
Upper Little Arkansas R, Watershed, KS	FDP	31Aug82	14Dec82	19Jan83							
Middle Rio Grande Flood Prot, Bernalillo to Belen, NM	FDP	17Sep79	2Apr80	2Jun80	12Sep80	9Dec80	21Jan81	23Jun81	25Jun81		
Tulsa Urban Study & Fry Cr, OK	FDP	30Sep82	14Dec82	18Jan83							
Mingo Creek, Tulsa OK	FDP	6Nov80	19Feb81	16Apr81	18May81	31Aug81	31Jul81	16Nov81	23Nov81		

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

		w/ BERH	w/ OCE						w/ ASA(CW)					
REPORT NAME BY DIVISION	TYPE	DATE OF DIV CDR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG	DATE OF ST CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB	OMB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
SWD														
Parker Lake, Muddy Boggy Cr, OK	FDP	14May76	29Sep76	2Nov76	23Mar77	20May77	3May77	30May80	9Jun80					
W.D. Mayo L&D 14, (Hydro), OK	MP	19Dec80	13May81	9Jun81	9Jul81	1Sep81	8Oct81	23Dec81	19Jan82					
Brazos Island Harbor, TX	NAV	15Feb78	21Jun78	3Nov78	27Dec78	10Jul79	25Apr79	20Dec79	31Dec79	4Feb82				
Colorado Rvr & Tribs, Boggy Cr, TX (Int)	MP	10Dec79	2Apr80	30Apr80	11Jun80	15Oct80	21Aug80	19Jan81	4Feb81					
Cooper Lake and Channels, TX	F&WL	22Apr81	9Sep80	19Oct81	4Nov81	4Jan82	25Jan82	21May82	1Jun82					DE notice not issued:date used is when sent to BERH
Lake Wichita, Holliday Cr, TX	FDP	23Dec76	18Jan78	19May78	18Aug78	9Apr79	7Nov78	9Jul79	17Jul79					
Lower Rio Grande Basin, TX	FDP	20Sep82												Sch for BERH Mtg No 1/83
Texas City Channel, TX (Int)	NAV	27Sep82	14Dec82	19Jan83										
Trinity Rvr Project, Miti, TX	F&WL	16Oct81	2Sep82	4Oct82	9Nov82		25Jan83							
LMV														
Big Five Drainage & Levee Districts, IL	FDP	17Nov81	11Feb82	11Feb82	18Mar82	22Jun82	21May82	2Sep82	10Sep82	20Sep82	7Oct82			
Degognia & Fountain Bluff D&LD, IL	FDP	15Nov82												
Barataria Bay WW Dupre Cut, LA	NAV	2Dec81	8Feb82	8Feb82	8Mar82	None	30Apr82	13Sep82	24Sep82	30Sep82	20Oct82			
New Orleans - Baton Rouge Metro Area, LA	URB	17Dec81	20Apr82	20Apr82	25May82	None	16Jul82	23Sep82	12Oct82	20Oct82	5Nov82			
Plattin Creek Basin, MO	FDP	23Jul82	4Oct82	4Oct82	9Nov82		14Jan83							

Mississippi R (Adequate Mooring Facilities), MO & IL	NAV	17Dec82										
Memphis Metro Area, TN, AR, MS	URB	11Dec81	5Mar82	5Mar82	7Apr82	3Sep82	15Jun82	23Sep82	4Oct82	12Oct82	28Oct82	
MRC												
Poinsett County, AR	FDP	7May82	7May82	7May82	8Dec82	7Jan83						
MRD												
Metro Sioux City & Missouri R, IA, NE, SD	URB	20Oct81	30Apr82	30Apr82	26May82	19Aug82	13Aug82					
Stranger Creek Basin, KS	FDP	29Oct81	18Jan82	19Jan82	24Feb82	17May82	15Apr82	30Aug82	14Oct82	25Oct82	16Nov82	
NAB												
Chesapeake City Bridge, MD	SP	4Nov81	11Feb82	11Feb82	4Mar82	13Apr82	9Jul82	29Oct82	7Dec82	22Dec82	20Jan83	
Smith Island, MD & VA	FDP	30Jun82	14Oct82	14Oct82	9Nov82		28Dec82					
Rahway, NJ	FDP	8Jul81	15Aug81	20Aug81	17Sep81		17Nov81	2Sep82				
Hempstead Harbor, NY	NAV	1Jun81	2Sep62	20Sep82	13Oct82	16Dec82						
Wallkill River Basin, NY & NJ (PHI)	FDP	24Nov82										
Westchester County Streams, NY	FDP	10Sep81	3Nov81	3Nov81	4Dec81	22Dec81	22Feb82	2Sep82				
Metropolitan Christina R. Bsn, PA & DE	URB	16Aug82	25Oct82	25Oct82	30Nov82	30Dec82	21Jan83					
Delaware Salinity Intrusion Study, PA, NJ, DE	MP	28Jan83										
Deep Creek, Newport News, VA	NAV	28Apr81	NA		NA			23Dec81	3Feb82	22Feb82		Awaiting OMB Comments(old process)

WASHINGTON LEVEL PROCESSING OF REPORTS RECOMMENDING FEDERAL ACTION

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NCD														
Great Lks St. Lawarence Seaway Nav. Season Ext. Final Rpt	NAV	31Dec79	9Feb81	18Mar81	23Jul81	28Dec81	10Dec81	3Mar82	9Apr82					
Lake Erie WW Mgmt Study	WWM	30Dec82												
Iowa & Cedar R, Basin, IA	FDP	10Sep82												
Quad Cities Urban Study, IA & IL	URB	8May81	17Jul81	7Aug81	1Sep81		10Dec81							
Lamoine River Basin, IL	FDP	7Nov80	15Dec82	13Jan83										
Lower Rock R, IL	FDP	14Dec81	7Apr82	7Apr82	26May82	None	19Jul82	3Jan83						
Rock R. Rockford, IL (Final)	FDP	7Oct81	8Dec81	8Dec81	20Jan82		19Mar82	5Nov82						
Great Rvr Res Mgmt Study, Int on Great I & II MN, IA, MO	MP	31Jul81	9Mar82	5Apr82	27May82	31Aug82	25Aug82							
Mississippi River Headwater Lakes in MN	FDP	12Nov82												
Mississippi R, Year Round Navigation & FC, MN	NAV	20Mar81	13May81	15May81	17Jul81	6Nov81	22Oct81	27Apr82	8Oct82	28Oct82	17Nov82			
Red Rvr of the North, Grand Forks, ND, MN	URB	30Sep81	14Apr82	14Apr82	29Apr82	23Jul82	20Jul82							
Irondequoit Creek, NY	FDP	30Jun82	31Aug82	31Aug82	8Oct82	27Oct82	15Dec82							
NED														
Housatonic Rvr Bsn Urban Study MA & CT	URB	27Sep82												

Searsport Harbor, ME	NAV	23Nov81	25Feb82	25Feb82	19Mar82	27Jul82	17May82	13Sep82	1Oct82	12Oct82	28Oct82
Southeastern New Hampshire Water Res Study, NH	FDP	25Aug82									
NPD											
Portland - Vancouver Metro Urban Study, OR & WA	URB	10Apr81	10Jul81	11Aug81	1Oct81	22Jan81	7Dec81	19Jul82	17Sep82	5Oct82	22Oct82
ORD											
Grand Lake, St. Marys, OH	FDP	11Dec81	10Feb82	10Feb82	12Mar82	29Mar82		30Aug82	4Oct82	18Oct82	3Nov82
Milton Dam & Res, Mahoning R. OH	FDP	12Sep80	13May81	29Jun81	16Jul81	None	6Oct81	30Aug82	30Sep82	14Oct82	2Nov82
Clarion Rvr Basin, PA Acid Mine Drainage (PH)	FDP	21Apr82	6Oct82	6Oct82	10Nov82		27Jan83				
Metropolitan Region of Wheeling, WVA & OH	URB	20Apr81	10Jul81	10Jul81	30Jul81	6Aug81	9Nov81	30Aug82	14Oct82	25Oct82	16Nov82
SAD											
Brewton and East Brewton, AL	FDP	27May82	27Jul82	27Jul82	19Aug82	11Jan83	7Oct82				
Little Lagoon at Gulf Shores, AL	FDP	10Dec81	17Mar82	17Mar82	9Apr82	14Oct82	18Jun82	23Dec82	24Jan83	28Jan83	
Withlacoochie W.R.S. S, FL	WS	17Dec82									
Lockwoods Folly & Shallotte R, Inlets, NC	NAV	17Apr81	10Jul81	20Aug81	17Sep81	30Apr82	4Nov81	23Sep82	14Oct82	25Oct82	16Nov82
SPD											
Phoenix Urban Area Study, AZ	URB	30Jun82									
Alameda Shoreline, CA	SP	18Oct82									
Baldwin Hills, CA Landslide Study, Int.	SP	7Jun82	14Oct82	14Oct82	9Nov82		13Jan83				

Sch for BFRN Mtg No 1/83

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WASHINGTON LEVEL PROCESSING OF REPORTS NOT RECOMMENDING FEDERAL ACTION

		w/BERH	w/ OCE						w/ASA(CW)			
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Carmel Rvr, Monterey Co, CA	FDP	12Feb82	30Mar82	30Mar82	11May82	5Aug82	28Aug82	13Sep82	6Oct82	18Oct82	3Nov82	
Kern River, CA	FDP	5Nov82	4Feb83									
New Hogan Fishery, CA	F&WL	30Jul82	25Oct82	25Oct82	9Nov82		18Jan83					
Novato Creek, CA	FDP	18Dec81										Sch for BERH Mtg No 1/83
Russian River Basin, CA	FDP	30Apr82	27Sep82	27Sep82	22Oct82	16Dec82	13Jan83					
Salinas - Monterey Bay Area, CA	URB	9Apr82	6Dec82	6Dec82	20Jan83							
Mill Creek at Moab, UT	FDP	17Sep82	20Jan83	20Jan83								
SWD												
Sabine R & Tribs, TX	NAV	30Oct81	11Feb82	11Feb82	2Apr82	9Jun82	17Jun82	30Aug82	27Sep82	4Oct82	22Oct82	

SUBCOMMITTEE RECESS

Chairman HATFIELD. If there are no other questions, then the meeting is adjourned until Wednesday, February 23, when we will have the Secretary of Interior.

[Whereupon, at 4 p.m. Wednesday, February 16, the subcommittee was recessed, to reconvene at 2 p.m. Wednesday, February 23.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, FEBRUARY 23, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2 p.m., in room SD–192, Dirksen Senate Office Building, Hon. James Abdnor presiding.

Present: Senators Abdnor, Kasten, Johnston, Stennis, and Burdick.

DEPARTMENT OF THE INTERIOR

STATEMENT OF HON. JAMES G. WATT, SECRETARY OF THE INTERIOR

ACCOMPANIED BY:

- GARREY E. CARRUTHERS, ASSISTANT SECRETARY, LAND AND WATER RESOURCES
- JOSEPH W. GORRELL, DIRECTOR OF BUDGET, DEPARTMENT OF THE INTERIOR
- R. N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION
- W. C. KLOSTERMEYER, ASSISTANT COMMISSIONER, ADMINISTRATION, BUREAU OF RECLAMATION

INTRODUCTION OF WITNESSES

Senator **ABDNOR**. The hearing will come to order.

Mr. Secretary, it is a pleasure to welcome you here today as well as Assistant Secretary Carruthers and Commissioner Broadbent. Mr. Gorrell, I welcome you and Mr. Klostermeyer as well.

We are happy to have you and your staff here today. We will receive testimony on the Department of the Interior's budget request and an update on the programs and activities of the Bureau of Reclamation.

I am sorry to have to tell you this, but as you know, Senator Hatfield has been unavoidably delayed. He is in Oregon. He asked that I chair the hearing this afternoon.

We have your prepared statement, Mr. Secretary, and the statement of Commissioner Broadbent, which will be made a part of the record.

Gentlemen, I do welcome you to this committee. We are anxious to hear from you.

Mr. Secretary, why don't we start out with you.

Secretary **WATT**. Thank you, Senator.

We appreciate the opportunity to appear before you. I think you know the Assistant Secretary and the Commissioner are with me today.

BUDGET REQUEST HIGHLIGHTS

I would like to summarize the highlights of the statement.

It is interesting to note that in the context of the Department of the Interior, we have about a $6 billion budget and we are talking today of roughly $1 billion of that amount.

This is an increase of $193 million over the continuing resolution, but only $18 million above the President's request for 1983.

It is important to note that the discretionary funds for the Department of the Interior on the whole are reduced in the budget request for 1984 and yet, for the Bureau of Reclamation, we are asking for about a 25-percent increase over the past year's appropriations.

This is a reflection of our general philosophy that we must invest in America if we are going to prepare for the 21st century. We can no longer afford to live off the assets of America without taking care of them.

PRIORITY OF WATER RESOURCES DEVELOPMENT

I would like, Mr. Chairman, to take the time to build for the record a little different story than we usually present to the committee in that I realize this committee just deals with energy and water development.

I would like to show the priorities and the tradeoffs that we make in establishing the $6 billion budget for the Department of the Interior.

The Reagan administration, unlike our predecessors, has put heavy emphasis on investing in the lands, the waters, the parks, the refuges, and the agricultural lands of America.

With your permission, I will share those figures with you in a moment.

We think that water is critical. We think that we must build water projects for the future. We think that one of the major domestic crises in the 1990's will be water shortages in every region of America.

With the West, we feel that there will be special problems because of agriculture needs, the growing populations, and energy and mining activities in the Western States.

RECLAMATION REFORM ACT OF 1982

This last year, Senator Abdnor, you had a key role in helping us to culminate a 50-year struggle in amending the Reclamation Act so that we could make it realistic with the times, and that was a significant effort that will benefit all of our people of those reclamation States.

We have abolished the principles and standards that were so detrimental in our efforts to build water projects and we will soon be coming out with principles and guidelines.

The President has signed those. I have signed some materials, in fact this morning, that will put them into the Federal Register soon.

COST-SHARING FACTORS

A lot of attention has been given and you, personally, Senator Abdnor, have paid particular attention to cost-sharing formulas that we are preparing.

We have asked that there be input from Governors and other interests around the country as we develop those concepts.

A new understanding has swept America—that the beneficiaries of water resource projects need to pay a greater share of the costs. But in this, we need to come up with guidelines that will give direction to cost-sharing activities.

It is important that we have enough flexibility in those cost-sharing formulas so that when dealing with a State like South Dakota, we can repay the debt I think America owes to the high-altitude States of North Dakota, South Dakota, Montana, and Wyoming in particular. We have flooded out some of the best lands of South Dakota, Wyoming, North Dakota, and Montana to benefit Senator Johnston's State and other downstream States for flood control.

We have lost some of our most economic land in order to help New Orleans and the cities down below.

Now, it is time for America to pay back and build the reclamation projects that are needed. That is why we come forward with a request for a 25-percent increase. That is why our cost-sharing programs have got to have that flexibility to allow that. I smile as I talk about Senator Johnston's State; his State needs much more flood control.

We have got to invest if we are going to protect those lands.

IMPACT OF FISCAL YEAR 1983 CONTINUING RESOLUTION

The effect of the Fiscal Year 1983 Continuing Resolution is detrimental to us. Candidly, we took a beating on that issue for reasons that are easily understood. This committee and its counterpart in the House did a good job in addressing the regular budget. They came out with the proper recommendations that would have made for a viable economy and improved the environment of these respective States, but for other reasons, the Congress was not able to deal with that. We are operating under a continuing resolution which slows down the delivery of water to people; slows down the environmental enhancement that can come from these projects, and reduces job opportunities in these States.

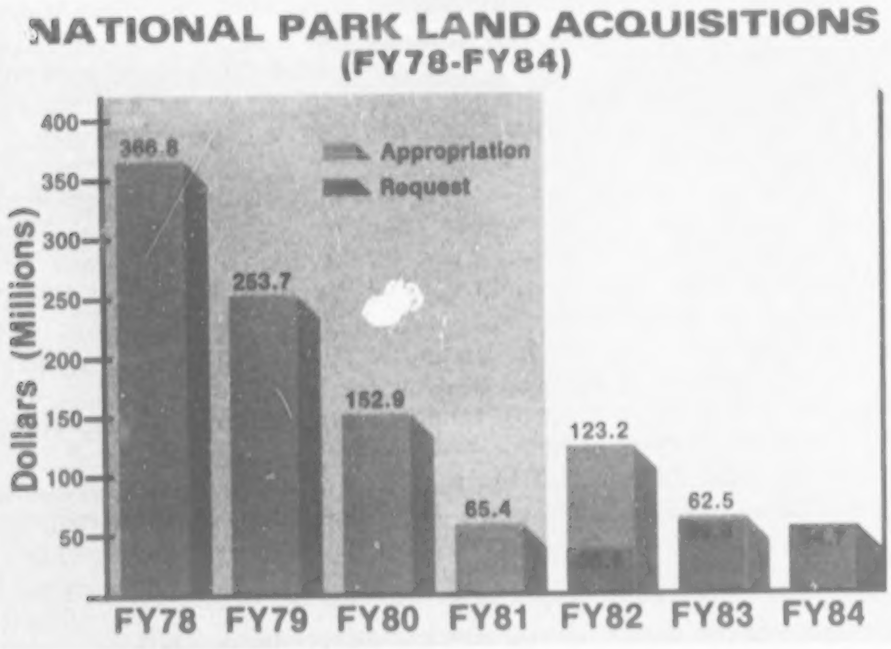
We think it was a mistake, and we urge Congress to address this. I think, Senator, that Congress will make up for this mistake in the jobs bill that the Democrats and Republicans are working on.

We did ask for 10 new starts and, hopefully, we will get the Congress to approve those new starts with the necessary appropriations.

EMPHASIS ON LAND

Senator, I think I have submitted annual reports to you; and if I haven't, I need to.

I would like to share with you the context within which we are putting together this budget, because we are only dealing with one-sixth of it. I would like to show you a chart that Senator Johnston, particularly, is going to be interested in. Ten years ago, he was chairman of one of the committees that had responsibilities for recreation and park activities. For those of you familiar with my annual reports, they talk about land acquisitions for the National Park System.



I am stressing that in the formulation of our $6 billion budget, we are putting money into the lands. Much of the criticism that you have read this last 2 years about Jim Watt has been that he has taken money from park land acquisitions.

Let's look at facts. I have not been successful in getting facts in the media. The facts are that, in every single year of the Carter administration funds were cut for acquiring park lands.

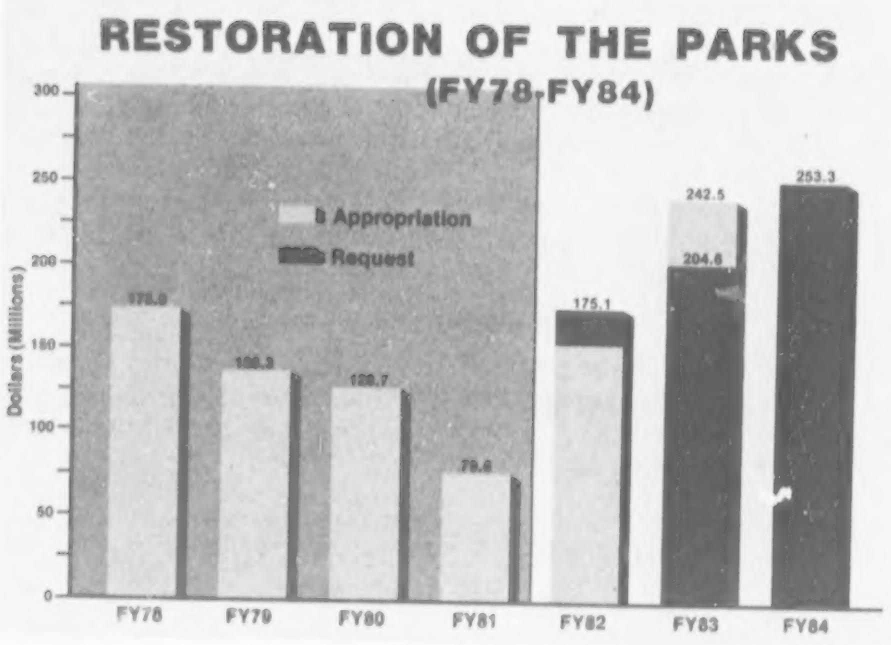
Now, I am not critical of the congressional decision. I am critical of the fact that we have not been able to get the facts into the media and that the special interest groups abuse truth.

Never did I hear any criticism that these funds were cut in each year. I guess I am blessed with fortune; you men have been so willing to look at truth and facts, but my congressional critics all voted to cut acquisition for the parks in the 4 preceding years.

They don't admit it to the TV cameras, but the facts are right here, and the facts have been on the record since 1977, when the revised fiscal year began and every subsequent year. But we have not had a press that would look at the facts on that.

ADMINISTRATION'S SUPPORT OF PARKS

We have done differently in the Reagan administration. For the audience's benefit, we are talking about the restoration of the parks. We found that during the Carter administration, every single year funds were reduced for restoring the national parks. In fact, they cut funds 50 percent as they doubled the size of the parks.



Senator Johnston, you will recall the work that you and I did on the land and water conservation fund. It was great working with you, because you understand the need of stewardship, of taking care of our resources.

Here you will see that every year my predecessors cut funding for the parks. Never did you hear of any criticism from these special interest groups when this was going on. Interesting what facts we can get into the media.

The special interest groups never highlighted the fact that these were votes against the National Park System. The first year I came in I asked for doubling of the funds needed to restore the national parks. The Congress did not give me everything I asked for. This isn't from this committee, by the way, for the audience and the record. This goes to the other Interior Appropriations Subcommittee.

Congress didn't give us all that we asked for. The blue is what Congress appropriated. The gold is what we have asked for. The second year Congress gave us more than we asked for. So, on the average, we came out just about perfect.

NEED FOR FUNDING FOR RESTORING PARKS

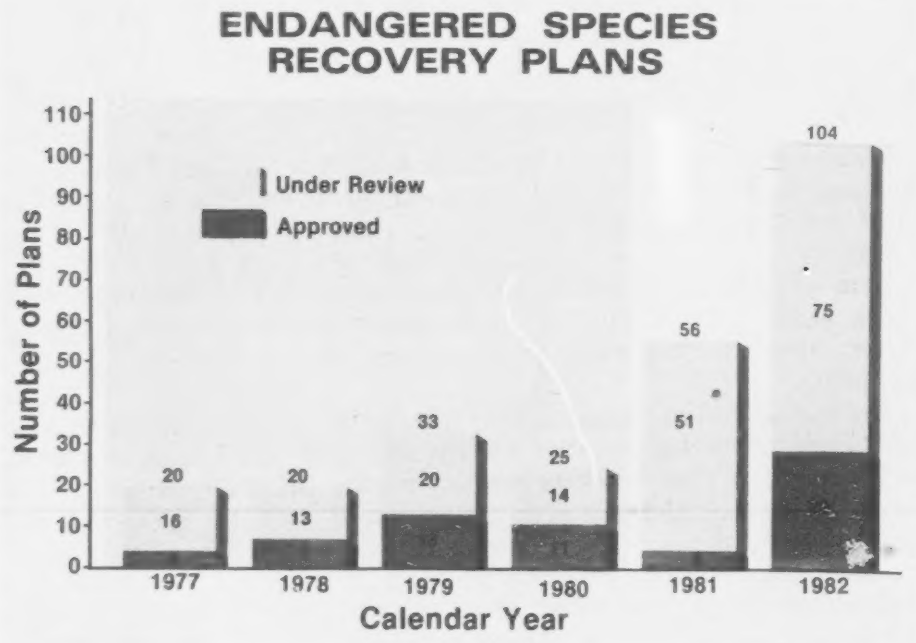
This year, the third year, we have asked for even more money to restore the parks. Now, I do not expect that I will ever get fairness in the special interest groups or the media, but let's look at reality.

On the acquisition side, the Carter administration had six times more money for acquiring park lands in their first year than they did in their last year. In taking care of the parks with stewardship, they cut in half the moneys available while they doubled the size of the national park system. That is not good stewardship.

I belabor these two charts and the third one because they show a philosophy that is applicable to water projects and everything else, and it deals with endangered species. We have introduced—and let me emphasize this—we have brought massive change to the Department of the Interior, I mean massive, wonderful change, because every type of land in the federal system is better managed today than it was 2 to 3 years ago. We believe in investing in the land.

ENDANGERED SPECIES RECOVERY

Now, this subject of endangered species isn't the most important thing, although it is important, but it is indicative of the philosophy that I stand for as contrasted to the 4 years before and to all the critics who refuse to talk about the truth.



The truth is that the previous administration did list many more endangered species than I have listed. They did not look to the recovery side of the statute which says, "If you are going to list an endangered species, you must then plan for its recovery."

You see, stewards believe in taking care of that which is given to their charge, whether it is parks or endangered species or water reclamation projects.

In 2 years, we have done 60 percent more in the way of recovery plans than the Carter administration did in 4 years.

I emphasize these things because we feel that working with Appropriation Committee members is the key to the change. You have been marvelous.

CONGRESSIONAL SUPPORT

The Congress has been supportive in all of these issues. We have not sought new legislation. Senator Johnston serves on the authorizing committee, and, as he knows, we have not had a legislative program. We have sought to bring these massive changes through the budget process, and in every instance, Congress has been able to address these issues and has supported us in the changes that we have brought.

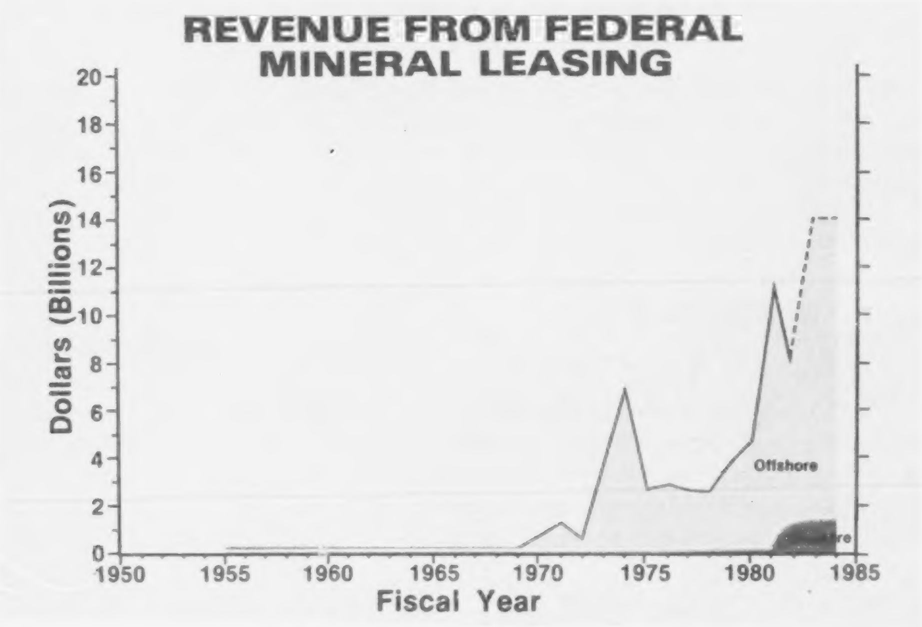
I am pleased to report for the record that all of my congressional critics voted to cut funding for the national parks, all of my congressional critics voted to cut moneys to take care of the parks, and all my congressional critics have voted with the recommendations I have given here.

I think that is indicative when you see these kinds of changes.

INCOME GENERATED BY INTERIOR

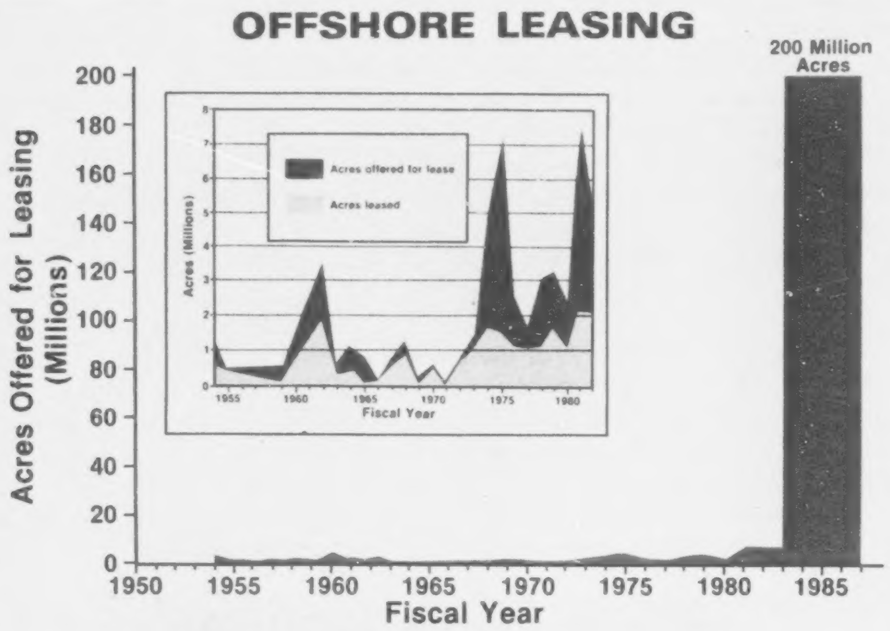
Not only am I to be one of the chief environmental developers, but I also have lots of other responsibilities, and one of them is money. You will see here by this chart that IRS is the only Federal entity that generates more income than does the Department of the Interior. We bring in about $15 billion, and most of it comes from offshore activities.

This is where we work with Senator Johnston so much, and the State of Louisiana has been extremely helpful to us on these issues.



MINERAL LEASING PROGRAM

This chart talks about some of the massive changes we have brought for better environmental protection of onshore and offshore lands. The insert here, with a scale of 8 million acres, gives a 30-year history and shows how the offshore leasing program has been manipulated in prior years to benefit Federal budget objectives—not for managing the resource; not for meeting consumers' needs; not for military purposes, but for manipulating the budget.



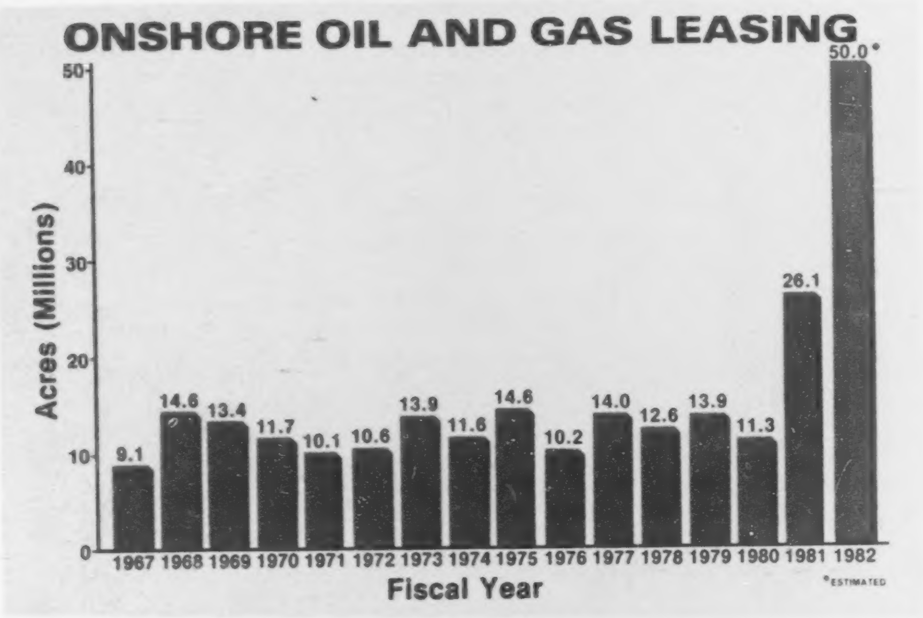
In 1981, we set the all-time record for offering leases and for leasing 2.2 million acres. Some of us will remember that when President Nixon was here, he called for Project Independence to lease 10 million acres a year.

We have changed the philosophy so that in the next 5 years we will make available for lease almost the entire Outer Continental Shelf, 200 million acres a year. There will be more environmental protection and enhancement than in prior years.

ENVIRONMENTAL PROTECTION

As the Senator from Louisiana knows, there is nothing more fragile than our wetlands and the bayous. We have compatible drilling activities with environmental enhancement and protection. If you have a legitimate, sincere concern about the environment and the ecology of wetlands, coastal barriers and the sandy beaches, you will be an enthusiastic supporter of this program. It is much more environmentally sound than bringing foreign crude on foreign tankers, and that is why we have had such a rousing support for this OCS program.

I am pleased to note, on this program, while there has been a good bit of criticism from the special interest groups, not one Member of Congress, House or Senate, has cast one single vote in opposition to our 5-year program, because it is sound environmentally, it creates jobs, it enhances our military security, and it is good.



OIL AND GAS LEASING PROGRAM

Onshore, we have done a similar thing. You will see here that the Department of the Interior, which is responsible for managing one-third of our land, had not kept up with the demand for oil and gas leasing activities. In fact, in 1982, we have leased almost as much land as the Carter administration did in its 4 years. This year we doubled what they did, and collectively we have done much more.

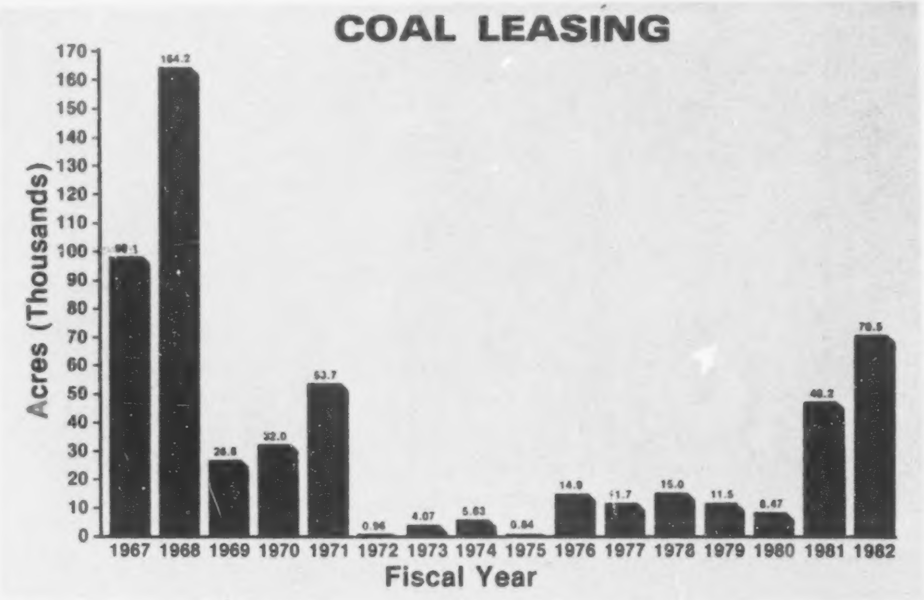
I emphasize these things for this reason. Onshore and offshore we have leased much more than our predecessor did, and it has been done with more environmental protection, more environmental safeguards, conditions, and stipulations than ever before, because we are emphatic about the belief that you can have environmental enhancement and protection and economic growth.

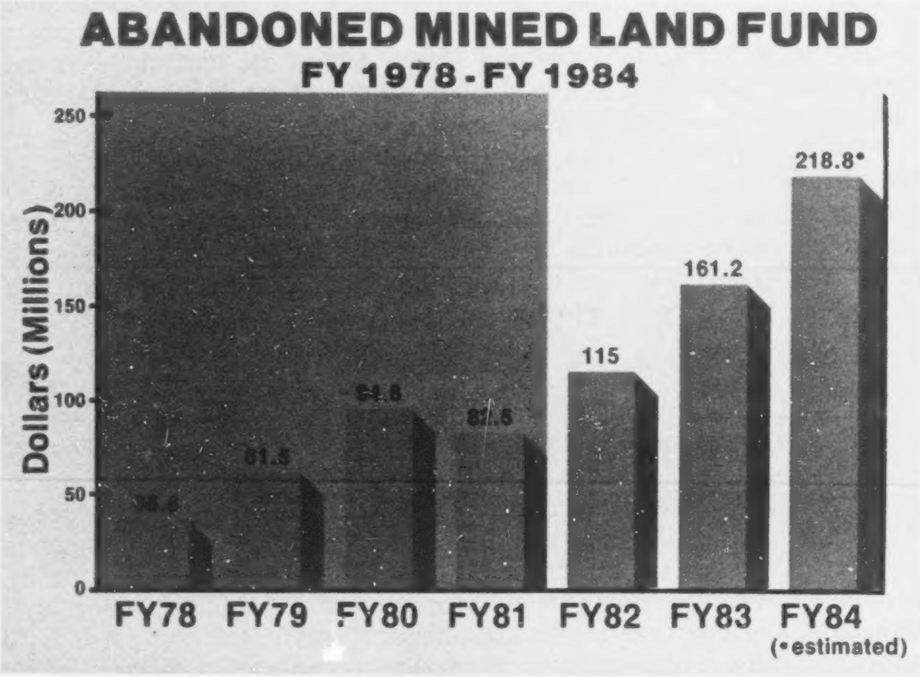
COAL LEASES

You will read from the special interest group critics that Watt has leased eight times more coal than the Carter administration did. True.

You will read that, "He shouldn't have done that because there are already outstanding coal leases that would meet America's energy needs for hundreds of years." Partially true. There is enough coal in America to meet our needs for hundreds of years. The coal that was leased by my predecessor, Secretary Udall, Congressman Udall's brother, was more than double what I have leased, but it was leased without today's concern for environmental protection or requirements for reclamation.

Then, after he leased these vast sums of acreages, we passed the laws that require reclamation and environmental protection. So most of these lands will never be mined, because they are not economic in their location when you take into consideration the lawsuits, the litigation, and the legislation that has come on since then.





So, we have had to do an awful lot. This chart shows you again the difference between the Carter years and the Reagan years, our emphasis on environmental reclamation and enhancement and protection, and restoration of abandoned mine land. You will see the vast differences in our philosophical approach there.

MANAGEMENT OF LAND AND WATER RESOURCES

I take the time to share with this committee what we are doing because it is within that context that we are making decisions on water. Now, we have put money in parks, and look at the changes we have brought. I stand for those changes. It is under our leadership that this has happened.

We put money into refuges. They have been ignored. The same story I tell about parks is basically true about wildlife refuges. Last year we asked for a 21-percent increase in the Bureau of Reclamation's budget because we believe that you must invest in water resources. We must invest in America if we believe in this country. That is why we have put money in the land.

We have established a phenomenal record. It's fair for me to say, without any fear of contradiction, that in every single instance, every type of Federal land—whether we are talking about the national parks, the national refuges, the national forests, or the public lands, all 750 million acres—the coastal barriers and the wetlands all are in better shape now because we have invested in the land and the waters of this Nation.

We are preparing for the 21st century and we are doing it with the full support of Congress and the Governors.

Congress has voted for all these changes as we have brought them through the Appropriations Committees, and that is why it is so critical that we have this committee with us.

COOPERATION WITH STATES

With regard to Governors, we have implemented a good neighbor policy. We have terminated the war on the West. We have quelled the sagebrush rebellion, and we have moved progressively to work with State and local governments so that we can bring about the good management that is needed. In South Dakota, Senator Abdnor, we have worked on some fisheries that you pushed hard for us to take care of. Today we have made an announcement, at the Senator's urging, which we think is good resource management.

We have worked on the water resource management projects in South Dakota and the other Western States.

Senator Johnston, I am pleased to report that Governor Treen has pushed on the Atchafalaya and Tensas. We have made some progress there and we think we are going to be able to open that up and really save those lands that are environmentally critical to us.

Your continued interest in the Senate on the conservation issues on which we work is appreciated. I know of your interest in the Atchafalaya and Tensas areas, and I think we will have some important announcements in the next several weeks.

It is a very costly report that I come to you with. I come with a Department request for less money than Congress gave us in 1983, but I am asking for huge increases for parks, refuges, and particularly water resource projects.

PREPARED STATEMENT OF SECRETARY WATT

That brings us back to the hearing today and my statement has been provided for the record. I will answer any questions you may have.

Thank you very much for letting me share this information with you.

[The statement follows:]

STATEMENT OF SECRETARY JAMES G. WATT

Mr. Chairman and Members of the Subcommittee, I am pleased to testify before you today in support of the budget request for the Bureau of Reclamation. Last year we proposed a budget that would reverse past practices which stymied water resources development and would, instead, effectively utilize our natural resources and promote economic development. While I know that it is not the fault of the Appropriations Committee, I feel it is very unfortunate that the Congress has been unable to pass an Energy and Water Development appropriations bill for 1983.

Because the Bureau of Reclamation is operating under a continuing resolution which holds its programs to 1982 levels, there will be some project delays and we won't be able to proceed efficiently with development of our resources. This would not be the case had our request or your recommended levels been enacted.

It is clear from the recommendations contained in the appropriations committee report for 1983 that you agree that water resource development is necessary and should be funded at higher levels than past years. I wish to thank you, Mr. Chairman and Members of this Subcommittee, for your support of prudent and balanced water resources development. I hope we can now move forward and actually provide the funding needed to proceed with an aggressive, effective, water development program.

The 1984 budget for the Bureau of Reclamation represents a continuation of our FY 1983 proposals and reflects the emphasis and importance this Administration places on water development. The total request for Reclamation is a little over $1 billion, of which $972 million is for discretionary programs. This is the largest amount ever requested for the Bureau's resource development program.

The largest part of the budget, $699 million, is for the construction program where work will continue on 73 projects. Included in this request is second year funding for the two new starts proposed in December in the 1983 budget amendment. These two projects, Buffalo Bill Dam modification in Wyoming and Headgate Rock Dam power plant in Arizona, cannot be initiated during 1983 under the terms of the continuing resolution. We still hope that some way may be found by Congress to get these projects underway this year.

Other projects will be considered in 1984 as additional new starts but cost sharing will have to be worked out and authorization or reauthorization may first be required. Potential additional new starts include Hoover Dam uprating and facility improvements, enlargement of the Palisades power plant in Idaho, Santa Margarita in California, and the Narrows Unit and Animas-La Plata in Colorado. The construction budget for 1984 will, however, enable us to keep our ongoing construction projects on a reasonable schedule so that we will be able to realize the very significant benefits they will provide when completed.

As you know, we have made efforts to streamline the planning process which will significantly shorten the lead time prior to construction of new projects. The $32 million requested for the General Investigations program is about the same as 1983. Funds will be provided for 42 investigations including seven new studies with emphasis on energy production, irrigation, municipal and industrial water supplies, and Indian water resources development.

To recover some of the costs of planning studies, the appropriation language we have proposed for General Investigations includes language that would make the costs of advance planning for projects a reimbursable expense, where appropriate, upon authorization of construction for those projects. There are four advance planning studies in the 1984 budget.

The $145.1 million request for Operation and Maintenance will allow some work deferred in prior years to be reinstated plus O&M activities will continue on 32 projects. As part of the effort to increase energy production, the O&M program also serves to uprate power plant facilities, where feasible, to increase generating capacity at existing units. With the completion of the uprating programs ongoing in FY 1984, the total installed capacity will be increased by 118.5 megawatts.

We have requested $41.5 million for the Loan Program which is $16.4 million higher than 1983. Similar to the Construction Program, the request for the Loan Program includes second year funding for the new loans proposed in the 1983 budget amendment. If funding is provided for 1983 and we initiate the new loans this year, one of the new loans will not require funding in 1984.

Like construction, there are other new loans that will be considered in 1984 to meet pressing needs in water development and conservation. The Bureau of Reclamation has a backlog of loan applications that we will be considering and recommending for new starts depending on the improvement in the fiscal situation.

We are also requesting $53.4 million for General Administrative Expenses and $1 million for the Emergency Fund.

In my testimony before you last year, we discussed the need for changes in administering the Nation's water resource programs. I would like to summarize the changes that have taken place in the past year.

The single most significant action affecting the management of water resources in several years was the passage of the Reclamation Reform Act. At long last we have a law that recognizes the realities of modern agriculture. Among the changes in former Reclamation law that are provided for in Title II of Public Law 97-293 are the following:

- Increases the 160-acre ownership limitation for farm operations to 960 acres for entities benefiting 25 or fewer individuals;
- Requires the payment of full cost for water delivered to lands in excess of the limitations set by the Act;
- Outlines new provisions to be used in the disposal of excess lands;
- Permits applications of Class I equivalency;
- Requires certification by water users;
- Requires that a plan for water conservation be developed by individual irrigation districts;
- Provides for the amendment of existing repayment and water service contracts, or the execution of new contracts, to bring districts under the terms of the new law. Districts which do not amend their contracts within 4½ years will be required to pay full cost for all water deliveries to land leased in excess of the 160-acre limit in a landholding; and
- Repeals the residency requirement.

Interim guidelines for implementing the law were developed, and six public hearings were held throughout the West and in Washington, D. C., from late October to early December of 1982, to receive comments for rulemaking. The hearings provided the public an opportunity to provide input to the rules before proposed rules are developed. We expect to publish proposed rules in April and promulgate final rules and regulations by September.

Another significant accomplishment during the past year was the repeal of the Principles, Standards, and Procedures which were so onerous that much needed water resources plans and projects could not be developed. Under the direction of the Cabinet Council on Natural Resources and the Environment, new planning guidelines were drafted.

After full consideration of the comments received, proposed Principles and Guidelines were promulgated as administrative guidelines instead of binding regulations. These Guidelines will place greater emphasis on State and local concerns and will simplify many of the cumbersome requirements contained in the old Principles and Standards. In addition, the new Principles and Guidelines will enhance our ability to identify and recommend to the Congress economically and environmentally sound water projects within reasonable time frames. The President approved the new Principles and Guidelines on February 3.

Though not included as a part of the proposed Principles and Guidelines, we are advocating a new policy on cost sharing which is certainly a key element in water resources development. Historically, beneficiaries of water development projects, especially in the Western States, have repaid most of the capital costs to the Treasury, although project repayment policies have differed among the various Federal water resources agencies and project purposes.

The traditional methods of water project financing need to be changed to match current economic realities. We all recognize that if our Nation is to enjoy continued economic growth and prosperity, there must be a recommitment to economically viable, environmentally sound water projects. To accomplish this, beneficiaries of water resources development must share a larger portion of project costs.

Over the past year, the Administration has explored proposals to alter the traditional methods of Federal water project financing. Implementing a uniform Federal cost sharing policy will be a big step forward in improving the management of our Nation's resources. I am seeking input on cost sharing from the Governors, water user groups, and the general public. I have asked for comments and recommendations to be submitted to me by March 25. All comments will receive careful consideration as we mold our final policy statement.

Mr. Chairman, this concludes my prepared remarks. I enlist your continuing support in making this year successful in carrying out our mutual objectives for this Nation. I will be pleased to respond to any questions you may have.

INTRODUCTION OF SENATORS

Senator ABDNOR. Thank you, Mr. Secretary, for that impressive presentation. Your figures and facts speak for themselves. Let me assure you it is gratifying to this Senator to know that we do have a man who understands the problem in a situation like that of my State. Government often fails to recognize what has transpired over the years and what brought on the situation as it is today.

As you mentioned, we do have other distinguished Senators present. Senator Johnston—we didn't get a chance to call on you for an opening statement, and Senator Kasten has joined us, too. Would you care to make a statement?

Senator JOHNSTON. Thank you, Mr. Chairman.

I would just like to welcome the Secretary here. I have no opening statement, but I would like to ask some questions later on.

Senator KASTEN. I also have some questions, but no opening statement.

DEVELOPMENT OF A NATIONAL WATER POLICY

Senator ABDNOR. Mr. Secretary, last year when you were before this committee, we discussed in some detail the administration's approach in formulating and focusing national water policy. We still have the same concerns expressed last year; namely, that there is no coordinated, comprehensive national water policy. We seem to be proceeding on an ad hoc, project-by-project basis. This committee has long been urging and pointing to the need to deal with changes in the national water policy, as I said, in a comprehensive way.

Why is the administration unable to address and propose a comprehensive policy for water resource development?

Secretary WATT. Senator, I appreciate your personal concern in that, because we have had many public meetings and private meetings in your office and in my office on that very subject because of your personal interest in it.

Earlier this week I had a briefing by our Office of Water Policy that was the most encouraging thing in 20 years on this very subject.

As you may recall, when I was in Government before, I was a deputy assistant secretary for the Department of the Interior and had responsibilities for water and the Water Resource Council. I saw the failures that the Council brought to the system and am delighted that the Congress has agreed that it should be terminated.

The briefing that I had earlier this week was from our Office of Water Policy (OWP) under the direction of Assistant Secretary Garrey Carruthers and OWP Director Tom Bahr, which outlined for me the national water summary that will be out in October of this year. It will present the data that has been accumulated for 100 years since the USGS has been in business. We will work with States in developing the national water summary that will allow decisionmakers like yourselves to focus on the issues that need attention and will highlight the concerns we have with all water sources.

WATER POLICY IN THE FEDERAL SYSTEM

The interesting thing, and the important thing in a pluralistic society which is our strength, is that we not have one entity that dictates water policy, and that is critical to us. We must have a mosaic, not a melting pot, but a mosaic of local governments, State governments, regional governments, and the Federal Government with no one dominating or dictating to the other. Frankly, if we had a dictator during the last several years, you and I as Westerners would have lost our Western water very quickly.

We have come in and reversed all those solicitors' opinions that were so wrong on that point.

So as we are building this federal system with the good neighbor policy, we are evolving, from the ground up rather than from the Secretary down, a national mosaic that is a water policy, and I am disturbed that we are not making as much progress as we should be. We are making more than has been made, and, frankly, our budget for fiscal year 1983 was a setback to us.

LEGISLATIVE PROPOSALS

Senator ABDNOR. Let me ask you this: Speaking strictly on policy—and you are making headway—when do you think that the administration will be submitting a legislative proposal?

Secretary WATT. I don't think the answer is in legislation, Senator.

Senator ABDNOR. Oh, you don't?

Secretary WATT. No. I don't think there is need to create a water commission or water council. I think the structure, the governmental structure, is in place with the Federal, State, and local entities.

RESPONSIBILITY FOR A NATIONAL WATER POLICY

Senator ABDNOR. How will we have a policy—a long-term direction? Will we approach this on an ad hoc, project-by-project basis, or are we going to have a clear statement, agreeable to both the Congress and the administration, on what our approach to water resources development ought to be?

Secretary WATT. I would hope that there would never be a dictator in water policy in any one entity; that the water policy of America is a collage, a mosaic of individual regional and water basins and community water policies. It would be wrong for the Federal Government to take over the jurisdiction of ground water, and there are forces in the Congress that would like that to happen. I oppose that. I think that is wrong.

Senator ABDNOR. But until we have a statement on the proper role of the Federal Government, isn't it a day-to-day thing and won't it change with each new administration?

Secretary WATT. We have a policy, we have a very forceful policy, and I try to make it as forceful as I can. That policy is that we do not dictate water law and water action from a Washington office. That is policy in and of itself. Once you start enunciating that this is the policy for America and forcing people to fit that mold, you abuse the people of Wisconsin or Louisiana or South Dakota.

POLICY OF FEDERAL NONINTERFERENCE

Senator ABDNOR. How do we bring this together? I mean, maybe I know what you are saying here, but, in other words, you do not think we actually need an overall policy. What is the policy, then? Is there a policy?

Secretary WATT. The policy is that we will allow local groups and governments to determine their future as they best define it, and we will not allow a national power center to dictate on local water problems.

Now, there are clearly some issues that are interstate, and that is why we have interstate compacts, that is why we have river basin commissions, and that is why we do those different things. It's important that we not allow a Secretary of Interior or any secretary of water, or whatever you might want to call that person, to dictate how water will be utilized in the State of South Dakota.

You will recall that the past administration had a Solicitor's opinion that said the Federal Government could assert so-called nonreserved water rights that would limit States' authority to appropriate water. That was totally antithetical to the 100 years of water law in the West. It was totally offensive to the State of South Dakota because it was wrong.

But if you allow that to be here in Washington, centered here, you are going to have those kinds of dictates that are wrong forever. We have corrected it.

PRIORITY OF STATES' INTERESTS

Senator ABDNOR. We have had a lot of discussions on water cost sharing, Federal coal and mineral rights, and different things. Does each State have a different policy? Are we going to let them make the determinations?

Secretary WATT. Yes. Under a State's rights philosophy, which this country was founded on, each State establishes its water law. When the Congress of the United States overrides that for a specific program or purpose, we will then have Federal law and it will be in the Federal interest. Because we are such dominant landowners in the West, we have a responsibility of ownership, and you couple that with Federal responsibility. That is why we are here asking for such an increase in funds. We have a responsibility of ownership.

So we have come forward with cost sharing. We say, as responsible landowners, we should pay for a portion of these water projects. For social welfare and other objectives, we should pay some costs, but local government should take the lead. We then had to go and settle some of the Indian issues, because there is a trust and treaty responsibility that the Secretary has to carry out on Indian water rights. That is a portion of this mosaic in the Federal water policy.

PATTERN OF STATE WATER REGULATION

Senator ABDNOR. Is each State different? Do they have any idea? Does each State know what it will be? Every State will be different?

Secretary WATT. Yes.

Senator ABDNOR. What will be required of the State on this?

Secretary WATT. Fortunately, we have had 200 years of successful history on that. The Eastern States have a riparian rights concept; and, as you know, the Western States have an appropriations water concept. It has worked out beautifully. We should not dictate one set of statutory laws for all States. The States are uniquely different. Louisiana has flood control problems. The West has water scarcity problems.

You should let each State and local government deal with their own interests, and they have done it marvelously well with tremendous success today, and the Federal role fits in and supplements where there is Federal responsibility.

Senator ABDNOR. On those real problems between States, how is that handled—between the States themselves?

Secretary WATT. Yes, and there is no river—I say this categorically—there is no river that has had more problems than the Colorado River.

There are seven States in that basin; my home State being one of them, Secretary Carruthers' State being another one of them, and Commissioner Broadbent's being another. Those States have worked that out without Federal dictates, and they have managed that river more effectively and with better management than any other thing, because the States did it without the Federal Government dictating a national policy. I will submit a statement for the record on our national water policy.

[The information follows:]

NATIONAL WATER POLICY

The administration believes that America's water interests are best served by restoring State primacy in water planning, development, and management. Bringing about the restoration of State primacy is less a matter of developing a comprehensive legislative package than it is an ongoing function of searching for areas where the Federal Government plays too large a role in water decisionmaking, and then taking whatever steps are necessary to minimize that Federal involvement.

We have taken, or plan to take, a variety of actions to achieve this objective. We have repealed the prior administration's principles and standards governing water project planning and replaced them with our own principles and guidelines reflecting our belief that a more flexible approach was needed so that non-Federal concerns would be the driving force in water project planning. We have aggressively sought to end the uncertainty surrounding Federal and Indian water claims by reversing the prior administration's specious assertion of Federal nonreserved water rights and by inviting interested States and tribes to sit down with us, at their own initiative, and negotiate and quantify Federal and Indian water claims. We have given new guidance to Federal land managers on how to garner water rights under State law and procedure. We have asked the Governors and others to join us in a new partnership to break the multibillion-dollar log jam that has prevented sound water projects from enjoying the financial backing they deserve.

While there is disagreement within the administration on the best way to address these and other issues and on how to get Congress to be more responsive to our Nation's water needs, there is broad consensus on the need to develop environmentally sound, economically viable water projects so that future generations of Americans can enjoy the same blessings that prior generations left us. Our principal coordinating vehicle is the Cabinet Council on Natural Resources and Environment and its system of subject-specific working groups. Neither the Cabinet Council nor its working groups hold public sessions or hearings, but we have used the Department of the Interior's Office of Water Policy to seek out the views of non-Federal interests on the principles and guidelines, cost sharing, and other issues.

Water has long been in short supply in much of the West, and Westerners have understandably paid closer attention to water issues. Such has not always been the case in areas where water supplies are historically abundant. While modest amounts of Federal moneys have been invested in Western water projects (paralleling other Federal programs funneling moneys into non-Western water projects), most water development in the West has been at the initiative and expense of non-Federal entities. Local initiative and funding for water resources development offers the best means of translating the West's experience into successful ventures elsewhere.

COAL SLURRY PIPELINE AUTHORIZATION

Senator ABDNOR. Senator Johnston

Senator JOHNSTON. Thank you, Mr. Chairman.

Mr. Secretary, sort of digressing a moment, we have a very serious problem in the Southeastern States, and that is, we need to get coal down there, and we have captive utilities and potentially captive utilities in getting the coal in that these utilities are served by only one railroad.

Most of our areas are served by only one railroad. That is why we are united in our area and almost completely united in wanting coal slurry pipeline legislation.

We have gone into that in great detail on the Energy and Natural Resources Committee and by an overwhelming margin last year voted a bill out with the votes of most, if not virtually all, of the Western Senators who are most attuned to the water issue.

We have had the experts testify, and they indicate that our bill leaves the West better off with respect to water, with respect to their own control over their water than they would be before. I know you are the key to that, and rumor has it that you are reassessing and reevaluating that question.

Secretary WATT. That is correct.

Senator JOHNSTON. Can you give us an optimistic note?

Secretary WATT. Everything that you have said is true so far. [Laughter.] The Cabinet Council that I chair will be making a reevaluation of that.

Frankly, we thought it would pass last year.

Senator JOHNSTON. It would have, if it had come to a vote.

Secretary WATT. For reasons that you understand better than I, it did not leave the House, and I don't believe it left the Senate either, did it?

The President, I am confident, would not have vetoed the legislation. We have taken a new look at it. Coal slurry lines are needed, and we fully support the need for construction of coal slurry lines. We hope that with the tremendous change in philosophy we have brought to the Department of the Interior we can become an exporter of coal, and if we are really going to export coal, we have got to bring coal slurry lines into existence as well as meet our domestic needs which you have discussed here.

I think that the administration will be speaking to this shortly. I think hearings are scheduled in about 2 weeks.

Senator JOHNSTON. March 14, I believe, is the date. Do you expect to be there at that hearing?

Secretary WATT. I will be there at that hearing if there is good news to bring to you, and if there is not, Secretary Carruthers will be the witness. [Laughter.]

Senator JOHNSTON. Tell him don't bother—we would prefer the good news. [Laughter.]

Secretary WATT. You don't need me to hold the hearing. If I am the listed witness, you know what I am going to say. If not, it is Garrey Carruthers, and you are on your own.

Senator JOHNSTON. Well, your lips say, "Maybe," but your eyes say, "Yes, yes, yes." [Laughter.]

So, I am very encouraged about this. [Laughter.]

ACQUISITION OF NATIONAL PARKS

I am also very encouraged about park acquisition. I have heard you say, in fact, what amounted to an exhortation—that we are not doing enough on park acquisition. As one who has been an enthusiastic supporter of that, that spurs me on to want to do more. You do agree, then, I take it, from these charts, that we do need to acquire more resources for the parks?

Secretary WATT. Absolutely.

Senator JOHNSTON. More than just completing those that have already been subject to condemnation and that sort of thing?

Secretary WATT. Yes. We have a backlog of about $3 billion of lands where Congress has put in the parameters of a boundary, and I would like to get on with the business. Right now, we don't have enough money to restore the parks. They were so badly managed. As you can see, the past administration was cutting funds 50 percent, while they doubled the size of the parks, it is phenomenal, but I appreciate the votes that I know you personally have given to restore the parks as this administration has come up to it.

The sad thing is, I cannot get this story in the media. They would rather be psychiatrists than reporters.

Senator JOHNSTON. Well, I am going to them from this meeting and say, "Watt and Johnston have agreed on the need for more park acquisition" and try to get it into the media.

Secretary WATT. That is an absolutely true statement. One thing you might want to add is timing. [Laughter.]

PROTECTION OF PARK RESOURCES

Senator JOHNSTON. Once we balance the budget, you mean?

Secretary WATT. Once we have some money to do it.

You can see with the priorities that I give to the Department, we put it into investment in water, because that is needed for people; we put it into restoring parks and refuges. I have not asked for significant funds for acquiring park lands because I think it is shameful—that is the nicest word I can say—for a Secretary of Interior not to take care of existing units in the national park system.

That is what has happened.

Senator JOHNSTON. Sometimes you lose the opportunity to acquire some of these lands.

Secretary WATT. Yes, you do.

SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

Senator JOHNSTON. What I would urge you to do in parks is to do what we did in the Senate, what I thought was going to be a great project, that is the Santa Monica National Recreation Area.

We passed a bill when I was chairman of the subcommittee that set aside $50 million, created a commission and told that commission, "Come up with an overall plan for the amounts for the National Park Service to acquire."

The plan would involve the acquisition of the seashore where necessary; certainly with a beach and that kind of thing, with easements of use; with zoning, with all of these multiple uses less than fee acquisition which I believe could have been done within the $50 million Federal allocation.

It passed the Senate; it didn't pass the House. We came along a couple of years later and allocated, I think, $300 million to acquire the whole of the Santa Monica. I have been there. There is no recreational use for most of the Santa Monica Mountains.

Indeed, to go out there and use them would be to destroy them. The principal use of the Santa Monica Mountains is what they call an air shed for Los Angeles, a very important use, but one that could be well taken care of either by zoning with very large plots or by easements.

Consequently, we are going to waste a great deal of money. I say "waste" in the sense that it will not be the highest and best use of that dollar.

Dollars will be going into acquiring that by fee which otherwise could be used to acquiring parks elsewhere that will not be acquired.

We ought to insist that our scarce dollars be used in the best way. Of course, people would like their land bought up, especially when they have got that method of having their land bought and then using it for their lives. I mean, that is having your cake and eating it too, and we have been doing that in parks, as you well know, for all this time.

So we ought to change that. I hope you will have your people come up with some innovative planning in that respect.

Secretary WATT. Thank you, Senator, and I appreciate the consistency you have demonstrated in the last 10 years that I have personally worked with you on that commitment.

Unfortunately, what you have outlined was not in the policy of the Department of the Interior in the last several years.

We have implemented—and Senator Wallop has been a real leader in this area—a land-use protection policy rather than a land acquisition policy which had been a custom of the Department of the Interior, unfortunately.

Santa Monica is one of eight case studies related to this new policy, and we think we are going to make some magnificent strides along the exact lines you have outlined.

The problem is that when you make the decisions that you did with regard to creating the Santa Monica Mountains National Recreation Area, you were advised by the National Park Service, I believe, in the first go-around, that it was going to cost $150 million. Then they raised their estimate to $300 million, I believe, in 1978.

I think those figures are correct.

Senator JOHNSTON. The legislation I was talking about was passed in the Senate long before that and passed the Senate but did not pass the House.

In the next Congress, they came along with the legislation you are talking about.

Secretary WATT. That is right. I think they were told it would cost $300 million. There is no way, in the 1980's, that we could acquire the Santa Monica lands for less than $1 billion. That is not only through inflation; much of it is, but there is a question about how well Congress is being served by these appraisals.

I have had some investigations going on there, and the eagerness to acquire and name new national parks was so great that the Department of the Interior did not serve Congress well in giving you good enough data on which to make your decisions.

Here we have a $1 billion proposal. I don't know what Congress would have done had they been told it would cost in excess of $1 billion.

Your earlier point is right on. With land inflation continuing, it is going to be even more than $1 billion by the time we get around to it. We have a $3 billion backlog.

There is no way we can get that done in the immediate 2 years like you and I would like to. We agree we ought to acquire this land.

Senator JOHNSTON. No, I don't think we should acquire it.

Secretary WATT. I am talking in generics; that we need to acquire it to protect it.

Senator JOHNSTON. Protect it, yes.

IMPACT OF DELAYS ON LANDOWNERS

Secretary WATT. We are not doing the present landowners justice. I think we are abusing those landowners.

We come in and we say, "This is going to be a national park," or whatever. We put the cloud and threat of eminent domain over their heads and then in some instances 30 or 40 years have passed and the Government has still not acquired what they said they were going to acquire or they have not protected what they said they were going to protect.

Congresswoman Beverly Byron of Maryland gets after me. She is on the committee, and she gets after me properly every time I go up there. She is absolutely correct. Forty years ago they authorized a national park and have not yet acquired the land. Those people have been left hanging with their inheritance and other problems. We abuse our people too much, and we need to take care of that which we take and not take more than we can take care of. Our problem is we have taken and not taken care of.

ATCHAFALAYA AND TENSAS PROJECTS

Senator JOHNSTON. One final question. I heard some good sounds in your statement about the Atchafalaya and Tensas basins. There is no money in this budget, as you know, this administration budget request.

Secretary WATT. That is right.

Senator JOHNSTON. Do I take it you will have some good news about making this budget cycle?

Secretary WATT. Better than that.

Senator JOHNSTON. What is "better than that"? [Laughter.]

Secretary WATT. It is better than that, and I have got to let it go at that. Governor Treen and I are working on it. In fact, I had a session on it today with our people, and I would rather not pursue it now in public format, but I will talk to you privately.

Senator JOHNSTON. That is good. That is excellent. I'd better quit while I'm winning, Mr. Chairman.

Senator ABDNOR. Senator Kasten?

APOSTLE ISLANDS LAND TRANSFER

Senator KASTEN. Thank you, Mr. Chairman.

Mr. Secretary, I would like to talk also a little bit about some Federal lands up on Lake Superior. What is the status of the Apostle Island transfers? As you know, at least it is my understanding that the Department of the Interior was interested in selling a property on Apostle Islands, but now there is a question, at least there is a controversy, about a possible property exchange.

I just would like to know what the status of the Apostle land transfer is at this point?

Secretary WATT. Senator, I am embarrassed to admit I'm not prepared on that subject and I will have to supply that for the record and get with you on that.

Senator KASTEN. Then I want to, if I can, just emphasize to you my concern. I will ask you to respond to the questions that I had prepared about the specific land transfer.

LAND EXCHANGE PROCEDURES

The problem is that evidently there are negotiations going on about the use of the dock and allowing access or the right to cross a certain amount of property. There are some negotiations going on which the Department of the Interior is considering giving back land which is already in a Federal park.

There is no precedent, as I understand it, for exchanging title for rights in a national park. We have looked to try to find whether there is. We could be breaking into a new area of law. Frankly, I and others in Wisconsin have great concerns about it. So, while I appreciate the fact that you might not be prepared about details right now, I want to assure you that I and the people of Wisconsin are deeply concerned with the management of our national parks in general, and specifically with the Apostle Islands.

Secretary WATT. Senator, let me have one of our people come to your office and speak to you or your staff about that personally.

Senator KASTEN. That would be very helpful, because this issue has generated a lot of news. We have had a lot of headlines. It is probably against the general direction you have been going in. It would be in opposition of what your conversation with Senator Johnston was. I just hope by raising this discussion with you today that questions and misunderstanding can be cleared up and we can go forward. We don't want to set any precedents here which then can be expanded out to other Federal lands.

Secretary WATT. I say this carefully, but I think there was a story in the morning paper, the local paper here the other day on that subject. I didn't read it, but generally they are wrong. So don't jump to any conclusions by the morning press here in this town. We will get you the facts later.

Senator KASTEN. I am not concerned about the press. That is why I am raising this question with you today. I believe that we agree with one another and see eye to eye on this issue. I appreciate your willingness to work with me to make sure that there are no more contradicting kinds of reports.

Thank you, Mr. Chairman.

[The questions and answers follow:]

APOSTLE ISLANDS

Question. What is the status of the Apostle Islands lands program at this point?

Answer. The lands program at Apostle Islands National Lakeshore is complete except for one 10-acre privately owned parcel and some State and local government-owned land. There are 76.57 acres held in life estates and 72.75 acres are subject to reserved rights.

Question. What is the status of the Apostle Islands land transfer?

Answer. The transfer to which you refer concerns the Rice-Andersen family proposal for the return of title to some of their former property at the national lakeshore. The United States acquired title to the property on April 7, 1981.

The family submitted their proposal to the Assistant Secretary for Fish and Wildlife and Parks through their attorney, Bradley C. Clary, on November 11, 1982. After a thorough review of the proposal by the Assistant Secretary's Office, the National Park Service, and the departmental Solicitor's Office, it was concluded that the proposal, as presented by the family, was unworkable. Because there was a need for a portion of the property encumbered with a life estate, the National Park Service considered various alternatives to the family's proposal. The Park Service concluded that the best alternative was one that would provide for a relinquishment of the life estate in exchange for the conveyance to the family of fee title to a small acreage of land. In addition, the family members would be responsible for maintaining, in perpetuity, several structures on the property that are listed on the National Register of Historic Places as a result of their efforts and investment over the past 50 years.

The Assistant Secretary's Office is now reviewing the alternative recommended by the National Park Service and, if they concur, it will be presented to the family as a counter proposal. If the family agrees to the alternative proposal, appraisals of the respective interests to be exchanged will be made. After any adjustments are made to equalize values, the transaction can be completed. The land conveyed to the family will be restricted to its present use.

Question. Why didn't the National Park Service acquire rights to Andersen's dock when the parcel was purchased? Why didn't the Service acquire all that it needed?

Answer. Section 4 of the act establishing the national lakeshore provides that with the exception of not more than 80 acres of land (not on Sand Island) to be used as an administrative site, visitor center, and for related facilities, the owners of agricultural or noncommercial, residential properties may be permitted to reserve use and occupancy for periods of up to 25 years or life. Since the Rice-Andersen property was not in the 80-acre site, the owners were granted, as part of the out-of-court settlement, their choice of a life estate in the property. In contrast to the enabling legislation for many other units of the national park system, the act establishing the Apostle Islands National Lakeshore did not grant the Secretary the discretion to deny reservations, except for the 80-acre site mentioned above.

Question. What precedent is there for exchange in title for rights in a national park? What is the implication for such a precedent?

Answer. The National Park Service has acquired numerous parcels of land by exchange under the authority of the 1968 Amendment to the Land and Water Conservation Fund Act. The Service has exchanged lands involving life estates in three separate instances at Cumberland Island National Seashore, Ga., one of which accomplished the relocation of a reservation from a high public use area to an out-of-the-way location. There are no other reserved estates in Apostle Islands National Lakeshore that encompass resources or features that are needed for immediate public use. We, therefore, see no precedent being established.

Question. Would the National Park Service have originated such a proposal without the landowners' initiative?

Answer. Whether the National Park Service would have originated such a proposal is hard to say. The concept may have surfaced as an option in the land protection plan for the unit. The exchange proposed by the family, however, would allow the Park Service to provide public access and development far earlier than would have been the case without it. Also, it enhances the maintenance of significant historic resources with private funds. We are pleased that the proposal was made which would allow the National Park Service the opportunity to provide public cultural and recreational benefits at this time.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

Senator ABDNOR. Thank you, Senator Kasten.

Mr. Secretary, I and other members of the committee have some additional questions. I won't go over them. There are some from my State. As a matter of fact, I have a number of questions to submit on behalf of my Governor, Governor Janklow. Let me say that we are very pleased with the progress we have made in working with the Department during the last 2 years.

With projects like WEB and CENDAK, Grassrope, and Lake Andes-Wagner, we have come a long way, but we're still far from where we need to be and where we should have been moving all through the years. Once in a while we think there are still some signs that the bureaucracy could get in the way. I know that we can count on you to help clear up any obstacles. Depending upon the progress of current activities within the Department, we may need to call upon you within the next year for some bold action to renew the commitment to the Dakotas and to ask for fair play.

I know you have been a great help to us and will continue to be.

I am not going to take time with my questions. I, like everyone else, will submit them in writing.

Secretary WATT. Thank you.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR ABDNOR

SOUTH DAKOTA WATER RESOURCE PROJECTS

Question. South Dakota has lost over 500,000 acres as part of the Pick-Sloan program in order to provide downstream Missouri River States with flood control and navigation benefits. The Department of the Interior has philosophically recognized the long outstanding Federal debt to the State to compensate for the lost acreage. Practically, how do you include such a factor in the funding and development of South Dakota water projects such as the CENDAK irrigation project or Belle Fourche rehabilitation project?

Answer. The Department of the Interior recognizes the unfulfilled commitment to the Dakotas under the Pick-Sloan Missouri basin program. Recognition of this commitment is demonstrated by our support of legislation authorizing the WEB rural water development project, funding for the Garrison unit, and studies of water projects in South Dakota. Also, we are considering reprograming additional amounts for acceleration of the central South Dakota water studies (CENDAK) and the Lake Andes-Wagner studies ($355,000 for CENDAK and $87,303 for Lake Andes-Wagner).

ETSI PIPELINE PROJECT

Question. Several downstream Missouri River States have sued the Federal Government to prevent South Dakota from allocating 50,000 acre-feet of Missouri River water for the proposed ETSI coal slurry pipeline. Do you believe allocation of Missouri River water should be a Federal decision? Do you believe it is appropriate to continue with water project development in the downstream States while those same States are alleging that there is insufficient water available in South Dakota to allow water project development in South Dakota?

Answer. On August 18, 1982, lawsuits challenging the legality of our action and that of other Federal agencies in connection with the ETSI coal slurry pipeline contract, dated July 2, 1982, were filed by the States of Missouri, Iowa, and Nebraska, and others in U.S. district court, Nebraska. We believe that because of the litigation, any further response would be inappropriate at this time.

ANIMAS LA PLATA PROJECT, COLORADO AND NEW MEXICO

COST SHARING POLICY

Question. How will the Department of the Interior proceed with water project cost-sharing requirements in lieu of any formal administration cost-sharing policy? For example, what type of cost-sharing agreement is the Department of the Interior developing with the State of Colorado for the Animas-La Plata project?

Answer. The Bureau of Reclamation is currently seeking acceptable cost-sharing arrangements on a project-by-project basis. It will continue to do so in the absence of a formal cost-sharing policy statement. The Bureau does not have a rigid formula that is applied to all projects. Instead, flexibility and sound judgment are exercised to insure that the best financial arrangements to fit the unique circumstances of each project are found. In the case of the Animas-La Plata project, we are exploring the possibility of the State of Colorado up-front funding the municipal and industrial water supply portion of the project by providing funding as necessary during construction.

DEPARTMENT OF THE INTERIOR COST-SHARING POLICY

Question. In view of the Reagan administration statements that the States must assume greater water project development responsibility under any new cost-sharing policy, is the Department of the Interior willing to abdicate its traditional role as project developer, construction agent, and project owner if the non-Federal developer wishes to assume major project responsibility?

Answer. We strongly encourage States and other non-Federal entities to pursue water resources development initiatives without Federal involvement where financial and other considerations do not prohibit such an approach. In such cases, we see no reason for the Federal Government to have any role.

Question. In other words, what new relationship will have to be developed between the Federal Government and the State in terms of making and implementing project development decisions?

Answer. When there are joint ventures between Federal and non-Federal partners, new arrangements on the rights to receive project revenues, title to the facilities, and the repayment obligation will be negotiated.

IMPLEMENTATION OF CONTINUING RESOLUTION

Question. There has been confusion regarding interpretation of the Fiscal Year 1983 Continuing Resolution and the Senate and House Energy and Water Appropriation bills. In particular, some Federal agencies have apparently stated that a project must be referenced in both the Senate and House reports before any funds can be released for that project. How have you interpreted and implemented the provisions of the Fiscal Year 1983 Continuing Resolution?

Answer. The joint resolution (Public Law 97-377) in section 101(f) of title I, contains a proviso that the approval of the Committees on Appropriations is required before work can be initiated or resumed on any projects or activity not in the fiscal year 1982 program. We implemented that proviso by sending a letter to the Committees on

Appropriations that listed all the projects that were not a part of the fiscal year 1982 program but that were considered by the President's request and either the House Committee on Appropriations or the Senate Committee on Appropriations. We included in the list and request for approval some projects that had been considered only by the House and not by the Senate and vice versa. We have received approval to proceed on all projects listed from both Committees on Appropriations. We have advised the appropriate field offices to initiate work immediately.

BELLE FOURCHE IRRIGATION PROJECT, SOUTH DAKOTA

Question. Will the Department of the Interior continue its opposition to the Belle Fourche rehabilitation project considering the fact that the Bureau of Reclamation fiscal year 1984 budget includes $36 million to initiate seven rehabilitation projects, considering the fact that five non-Pick-Sloan projects—Colorado-Big Thompson, Kendrick, Shoshone, Riverton, and North Platte—have been previously integrated into the Missouri basin Pick-Sloan program, and considering the fact that Belle Fourche rehabilitation is totally consistent with water conservation objectives.

Answer. We understand Senate bill S. 448 to authorize rehabilitation of Belle Fourche irrigation project was introduced on February 3, 1983. We will continue to oppose this bill because it is contrary to the administration's current policy requiring direct beneficiaries of Federal projects to pay for the costs of the benefits they receive. Since power revenues from other projects would be required to pay the majority of costs on the Belle Fourche project and since irrigation costs are considered interest-free under reclamation law, the proposed legislation would not be in the best interest of the Federal taxpayers or power customers. However, if legislation is passed we will support the intent of the act and work with you to rehabilitate the Belle Fourche project.

PICK-SLOAN MISSOURI BASIN PROGRAM

Question. Would you be willing to support a riverside irrigation program in South Dakota whereby the Federal Government would only have to provide the 2.5 mill power promised to South Dakota by the 1944 Flood Control Act and possibly some small development loans, while the State and other non-Federal interests would assume responsibility for main distribution—canal and lateral—development? Such a program would provide financial relief to the Federal Government in terms of reduced funding for costly irrigation projects and would at least partially fulfill the Federal commitment to the State to secure irrigation development under the provisions of the 1944 Flood Control Act.

Answer. We are willing to look at proposals that may include the concept of making Pick-Sloan Missouri basin program pumping power available for viable irrigation development along the main stem of the Missouri River in South Dakota. But we oppose general authority for that purpose. Each potential project should be evaluated to determine its viability prior to a recommendation for the use of P-SMBP pumping power, with subsequent congressional approval for each individual project.

OVERHEAD COSTS CHARGED TO PROJECTS

Question. One of the major problems with developing irrigation projects is the enormous cost involved. This problem is severely aggravated by the Bureau of Reclamation imposing a 65-percent overhead factor. What can you do to make such overhead more reasonable?

Answer. I know of no case where we have a 65-percent overhead factor being applied against a Bureau project. Overhead surcharges are utilized to financed centralized operations which support project activities but cannot be charged directly to a project. The amount of overhead charged to a project is directly related to its utilization of centralized services, such as engineering design work and development of contract specifications. These services are charged on the basis of direct costs for benefits received.

As a percentage of total construction costs, overhead surcharges average 12 percent or less per project. The Oahe project, for example, incurred $2.4 million in surcharges imposed for the centralized services required. Total cost of the project was $41.8 million, making the overhead assessment 6 percent of the total.

Overhead surcharges sometimes comprise as much as one-third of the cost of certain general investigations. We are concentrating our efforts in this area to gain greater control of overhead expenses by identifying indirect costs which can be properly funded through the general administrative expense appropriation. Successive reductions in funding for the general administrative expenses program have prevented any progress toward this end, however.

BIG SIOUX HYDROLOGY STUDY, SOUTH DAKOTA

Question. Since June 1981, State and local officials have worked diligently with Department of the Interior officials to secure Federal funding for the Big Sioux hydrology study. To date, the Federal agencies have provided exuberant support for the project but have committed only $50,000 in funding support—from the fiscal year 1983 cooperative program. Can you provide up to $350,000—from the Secretary's contingency fund or other sources within Interior—in fiscal year 1983 to match the currently available $400,000 of State-local funds to begin the Big Sioux hydrology study? Will you also seek additional funds to continue the study in fiscal year 1984 and future years to complete the study?

Answer. No; the Secretary does not have a contingency fund nor are there any other sources of additional funding for this study within the Department of the Interior. Funding in fiscal year 1984 and future years, if any, would be within the purview of the Geologic Survey and, therefore, would come from the Interior and Related Agencies appropriation, but none is proposed in the President's budget.

INTRODUCTION OF SENATOR STENNIS

Senator ABDNOR. I know that you want to be on your way, Mr. Secretary, but Senator Stennis just came in.

You got here just in the nick of time, Senator.

Senator STENNIS. Sorry I couldn't be here earlier.

Senator ABDNOR. We can't get along without the Senator from Mississippi. I thought it was strange, knowing of your great concern and interest in water, and thought that you would certainly be here. We are happy you got here just in the nick of time. The Secretary was just getting ready to leave.

Senator STENNIS. Mr. Chairman, Mr. Secretary, I am delighted to be able to get here under any circumstance, even though I am a little embarrassed to come in here right as the Secretary is ready to leave. I just had to be away from Capitol Hill and I got back as soon as I could.

This is our claim of inalienable privilege around this. This is the first subcommittee I ever became a member of. You may not know, but I became a member of this subcommittee before I got to be a member of the Appropriations Committee. It was possible in those days to be an ex officio member from the Public Works Committee on which I served.

Senator ABDNOR. Is that right?

Senator STENNIS. Yes, ex officio member down here.

I think you are doing some mighty fine work—I know you are.

Secretary WATT. Thank you.

VALUE OF WATER RESOURCE DEVELOPMENT

Senator STENNIS. I know our chairman here, of his interests and what he has done in this area. He has been a valuable Member of the Congress for several years. Certainly, I am going to be with you people in every way that I possibly can.

Secretary WATT. Thank you, Senator.

Senator STENNIS. I will certainly examine your testimony here today, too, Mr. Chairman.

Senator ABDNOR. Thank you.

Senator STENNIS. For this is one of my special interests. I just had to be away on a matter over which there was no choice.

We have got to get ourselves going, though, and some projects and policy on these water projects.

Secretary WATT. Senator, here, the budget we are presenting to the Congress this year calls for about a 25-percent increase in funding because we are committed to building water projects to meet peoples' needs. It has just been too long in coming. If we are going to invest in the future of America, we have got to put the money up, and that is what this administration has done in establishing its priorities.

CARLSBAD PROJECT, NEW MEXICO

Senator STENNIS. That is good news. I can tell Senator Domenici, who is one of our strong, fine members, that the first Bureau of Reclamation project I ever saw was in Carlsbad, N. Mex. It had just been started, and that was a good number of years ago. It is still in operation, has paid itself out many times. It has expanded. Now he is very happy to be on a committee where he can get his hand in it. [Laughter.]

Now, this was a ways back. But they were looking to the future—greater employment and higher production, you know.

Secretary WATT. Absolutely.

Senator STENNIS. Yes. I went out there and it made me jealous. Now they were growing more cotton, twice as much as we could in Mississippi.

Thank you, Mr. Chairman.

Senator ABDNOR. I see Senator Burdick has arrived.

Mr. Secretary, we have a sense of timing here, [Laughter.]

You think you are through, but you are not. Do you have anything further?

Senator STENNIS. No. Thank you very much.

EMPLOYMENT AND JOBS PROGRAM

Senator ABDNOR. We have been joined by the Senator from North Dakota. While he is getting himself organized, let me ask you one quick question, because I know you are aware of the speculation regarding the possibilities of a jobs bill in the near future. I am wondering if you have had any discussions with the OMB regarding the Bureau of Reclamation's involvement?

Secretary WATT. Yes, we have, Senator. Thank you for bringing that subject up.

The negotiations with the Democrats and the Republican leadership is underway, so I don't know the specifics, but we have proposed to OMB that we make up for the 1983 Continuing Resolution and that we get our 10 new starts underway and that we accelerate some of the 1984 work, because as Senator Stennis said, it creates jobs and it prepares a better military base and it enhances the environment and the working life of those communities. So we are hopeful that the Republican and Democrat leadership will incorporate some of these proposals into the jobs bill.

Senator ABDNOR. You are ready to go?

Secretary WATT. Absolutely. Absolutely.

Senator ABDNOR. We might submit questions to ask you what you see that you could do with the dollars that may be made available so that we have it on the record.

Secretary WATT. That material is available. It has been submitted to you.

ADDITIONAL QUESTIONS FOR THE RECORD

Senator ABDNOR. Maybe you can give us the number of jobs you see it creating. We also have several other questions relating to the jobs bill that I'll put in the record for your attention.

Secretary WATT. We can create several thousand jobs immediately and are eager to do so. We will answer all the subcommittee's questions on the employment/jobs program.

[The questions and answers follow:]

EMPLOYMENT/JOBS PROGRAMS

Question. Do you believe that Bureau of Reclamation activities can help put people back to work in a meaningful way, and are you prepared to carry out, in full, a jobs program which, if enacted, includes the Bureau of Reclamation?

Answer. Reclamation activities to be included in a potential jobs bill for the most part would make a demand on employment in the near future and for some would remain in effect for some time. Reclamation is prepared to initiate steps immediately to meet the requirements for any proposed jobs bill that includes the Bureau of Reclamation up to a total of approximately $150 million.

Question. What, in your judgment, is the quickest way to put people to work relative to Reclamation activities: One, new construction starts; two, acceleration of ongoing work; three, increased emphasis on operations and maintenance; or four, a combination of all three?

Answer. Significant employment can be utilized in the immediate future for ongoing construction work under both the construction and loan programs and for operation and maintenance activities. The employment needs for construction and loan new starts will be small at the beginning but will increase during the second year of the construction work. Thus, the lasting contribution of the potential jobs bill is really a combination of the three categories you mentioned.

DIRECT AND SECONDARY EMPLOYMENT

Question. I believe that, to a great extent, the employment benefits and the lasting contributions of these types of Federal public works projects are overlooked and much maligned. First, what is the total direct employment supported by Reclamation's $975 million budget for fiscal year 1984? Considering the multiplier effect, what is the secondary employment generated by the 1984 request?

Answer. The majority of the non-Federal employment supported by Reclamation activities relates to the construction, loan, operation and maintenance, and general investigations programs. The direct and indirect—secondary—employment generated by the fiscal year 1984 request for each of those programs is as follows:

EMPLOYMENT GENERATED BY RECLAMATION PROGRAMS

[Dollar amounts in millions]

Program	Fiscal year request	Direct Non-Federal work-years	Indirect Non-Federal work-years
Construction program	$699.4	14,000	24,500
Operation and maintenance	$145.1	2,900	5,100
Loan program	$41.5	800	1,500
General investigations	$31.8	630	1,100

BASIS OF JOB ESTIMATE

Question. How do you estimate the number of jobs created by a given amount of funding? Does this vary for construction, operation and maintenance, et cetera? Please explain why.

Answer. Based on a Reclamation study of a few of our construction projects, the amount of direct non-Federal employment was determined for each million dollars appropriated for construction. That study has been updated to 1982 and it now shows that 20 non-Federal work-years of direct employment are generated for each million dollars appropriated. That factor also applies to the loan program and to the portion of the operation and maintenance program that is contracted—that is, not expended on Government employment—which is approximately 60 percent. The study did not include the general investigations program, but for estimating purposes we are applying the 20 work-years factor to the portion of this program that is not expended on Government employment. The portion of this program that generates non-Federal employment is approximately 60 percent.

Question. What is the Bureau of Reclamation's rule of thumb on the numbers of jobs, both direct and indirect, created per million dollars of funds? Does this include necessary tools, equipment, materials, and transportation?

Answer. The Bureau's rule of thumb on the number of jobs of direct employment created per million dollars appropriated is based on an earlier Reclamation study that determined 20 work-years of non-Federal employment was generated for each million dollars appropriated for construction activities. We agree that the amount of indirect, or secondary, employment generated is greater than the direct. We have been using the factor of 35 work-years for each million dollars appropriated which comes from a study done by the Washington State Department of Ecology. The amounts for materials, supplies, equipment, and transportation are included in other components for each million dollars appropriated.

UNEMPLOYMENT RATES

Question. What are the unemployment rates in the various construction trades and industries involved in building the typical Reclamation project? Please be specific by major trade or industry for each of the 17 Western States.

Answer. Although the 17 Western States employment offices do not keep records on unemployment by specific construction trade groups, most of them do keep records and post rates for construction in general. The following is a list, by State, of the reported unemployment rates.

The nationwide average unemployment in the construction industry for the first 11 months of 1982 is as follows:

Month	*Average unemployment*
January	18.7
February	18.1
March	17.9
April	19.4
May	18.8
June	19.2
July	20.3
August	20.3
September	22.6
October	23.0
November	21.9

The following table identifies the 17 Western States and shows for each the overall State unemployment rate as of December 1982 and the costruction industry unemployment rate:

State	Overall unemployment	Construction unemployment
Arizona	10.4	21.0
California	11.0	28.0
Colorado	9.0	10.7
Idaho	10.2	23.2
Kansas	7.1	13.2
Montana	9.2	21.2
Nebraska	7.0	15.2
Nevada	12.2	25.1
New Mexico	9.4	19.5
North Dakota	7.9	15.8
Oklahoma	6.8	7.7
Oregon	12.0	28.1
South Dakota	13.0	25.4
Texas	7.4	6.6
Utah	8.9	17.5
Washington	12.5	24.1
Wyoming	8.0	15.5

1983 JOBS BILL CAPABILITY

Question. Now, if Congress saw fit to give the Bureau of Reclamation an additional sum of money over and above your current level of funding and asked you to use it in a way that maximizes and has the most immediate impact on unemployment, how would you respond? Provide for the record a detailed plan showing the new or additional employment generated, the kind of work proposed, and an estimate of how long it would take to start bringing the additional jobs on-line? Please provide this by specific project.

Answer. We have examined the Bureau's fiscal year 1983 programs with a view of identifying those projects and activities which have potential to rapidly generate employment. The work-intensive study showed that by funding $150,750,000 for work in four of Reclamation's appropriations, about 3,026 work-years of employment could be created. We will furnish for the record a copy of the study. It lists the projects, the type of work, the cost of the work, and the work-years produced by the desired funding.

The following is a summary of funds required to implement Reclamation's proposal to create economic activity. An estimate of the work-years generated by the increased activity is also listed:

BUREAU OF RECLAMATION 1983 JOBS BILL SUMMARY

Appropriation	Fiscal year 1983 funding requirement	Work-years generated
Construction program	$75,000,000	1,500
Operation and maintenance	26,800,000	536
Loan program	42,450,000	850
General administrative expenses	6,500,000	140
Total	150,750,000	3,026

POTENTIAL WORK IN THE 1983 JOBS BILL
Construction Program
(Dollars in Thousands)

Project	Estimated New or Additional Cost	Workyears Generated	Type of Work
Columbia Basin, Third Powerplant	2,700	54	Completion and modification of powerplant
Columbia Basin, Irrigation Facilities	1,200	24	Construct Block 26 laterals
Chief Joseph Dam, Whitestone Coulee Unit (D&MC)	300	6	Install weedscreen and modify canal
Little Wood River (D&MC)	200	4	Install minimum health and safety facilities
Boise, Payette Division (D&MC)	250	5	Install minimum health and safety facilities
Okanogan, Okanogan Irrigation District (R&B)	70	1	Rehabilitate distribution system
Yakima, Yakima-Tieton Irrigation District (R&B)	9,000	180	Rehabilitate distribution system
Minidoka, Island Park (SOD)	500	10	Modification of dam
Sacramento River Division, CVP	2,000	40	Construct water distribution facilities
Klamath (D&MC)	700	14	Construct distribution and drainage facilities
Central Arizona Project	19,000	380	Continue construction of Granite Reef pumping plants, issue additional awards for Salt-Gila Canal, and complete construction of transmission lines.

Project	Estimated New or Additional Cost	Workyears Generated	Type of Work
Title I Division, CRBSCP	2,850	57	Construct clearwell pumps and motor and energy recovery units
Headgate Rock Hydroelectric	3,800 1/	78	Issue awards on powerplant and transmission lines
Bonneville Unit	5,560	114	Complete facilities on the collection system and associated recreation facilities.
Dallas Creek Project	4,000	80	Construct stage II work on Ridgway Dam
Dolores Project	2,780	55	Initiate Great Cut Pumping Plant and work on McPhee Dam facilities
Lyman Project	180	4	Repair Meeks Cabin stilling basin
Grand Valley Project	300	6	Complete Grand Valley laterals
Paradox Valley Project	1,400	28	Initiate deep well injection test
Eden (D&MC)	300	6	Repair Big Sandy Dam spillway
McGee Creek	2,030	41	Accelerated contractor earnings on McGee Creek Dam
San Luis Valley, Closed Basin Division	500	10	Award construction of salvage wells
Brantley	200	4	Evaluate cultural and historical resources
Wichita	70	1	Safety features at recreation park
Washita Basin	70	1	Chemical storage and recreation facilities
Mountain Park	140	3	Recreation facilities

Project	Estimated New or Additional Cost	Workyears Generated	Type of Work
Navajo Unit	100	2	Tailwater area recreational facilities
Norman	40	1	Recreation camp grounds
W.C. Austin	40	1	Park information center
San Angelo	70	1	Recreation and health facilities
Buffalo Bill Dam Modification 1/	1,050	21	Issue awards for turbine and generators
Riverton Unit, PSMBP	800	16	Construct drains
WEB Rural Water Development	3,000	60	Continue design and begin construction of pumping plant
Garrison Diversion Unit, PSMBP	5,000	100	Continue construction of New Rockford canal and acquire land
Polecat Bench Area, PSMBP	400	8	Conduct canal modifications
North Platte, Guernsey Dam (SOD)	2,200	42	Rehabilitate north spillway
North Loup Division	1,000	20	Construct Calamus dam and Mirdan canal
Fryingpan-Arkansas	1,200	22	Pueblo Reservoir recreation facilities
Total	75,000	1,500	
Operation and Maintenance			
Boise Area	100	2	Replace road grader and acquire supervisory control
Columbia Basin	1,500	30	Replace stator winding and transformer

Appropriation/Project	Estimated New or Additional Cost	Workyears Generated	Type of work
Minidoka Area	900	18	Pave road and BlackTail Park parking area
Hungry Horse	40	1	Replace potential transformer
Yakima	80	1	Replace boom truck
Central Valley	2,500	50	Replacements and additions to powerplants and irrigation facilities
Solano	800	16	Restore Lake Berryessa administrative complex
Yuma Area Project	11,000	220	Dredge, construct 34 miles of Yuma Valley levee
Boulder Canyon	1,200	24	Operational expenses; replace fireline to switchyard
Parker-Davis Project	530	11	Replace circuit breakers and phase bus cables
Collbran Project	400	8	Complete repair of Blackman dam
Middle Rio Grande	1,000	20	Complete rehabilitation of low flow conveyance channel
Rio Grande	1,300	26	Improve recreation facilities; repair Elephant Butte dam and powerplant
Palmetto Bend	40	1	Clear brush around dam
Wichita	50	1	Erosion control and clear brush.
Washita Basin	80	1	Renovate boat ramp and erosion control
W.C. Austin	40	1	Erect fence and erosion control
Arbuckle	20	1	Erect fence

Appropriation/Project	Estimated New or Additional Cost	Workyears Generated	Type of work
Norman	30	1	Rehabilitate recreation area; clear brush
Mountain Park	30	1	Erect fence; improve recreation area
Carlsbad	110	1	Rehabilitate recreation areas
El Vado	70	1	Rehabilitate recreation areas
San Juan Chama	60	1	Improve recreation area, erosion control
San Angelo	20	1	Erect fence
Upper Missouri Area	1,400	28	Install emergency cable bypass at yellowtail
North Platte Area	1,000	20	Construct Casper control center addition
Examination of Existing Structures	1,000	20	Conduct analysis of existing dams
Reclamation Reform Program	1,500	30	Implement and administer the Reclamation Reform Act of 1982
Total	26,800	536	

Project	Estimated New or Additional Cost	Work Years Generated	Type of Work
Oakdale Irrigation District	500	10	Rehabilitation and Improvement
San Benito Water Conservation	4,000	80	Distribution System
Eastern Municipal Water District	3,900	78	Distribution System and Pumping Plants
Rainbow MWD (Cost Escalation)	9,100	182	Distribution System and Reservoir
Ak-Chin Indian Community (East)	2,100	42	Distribution System
North Cache Water Development Committee	2,000	40	Rehabilitation and Improvement
Delta Lake Irrigation District	1,000	20	Rehabilitation and Improvement
Hidalgo County Irrigation District No. 2	1,000	20	Rehabilitation and Improvement
East Bench Gravity Company	1,000	20	Rehabilitation and Improvement
Central Nebraska Public Power and Irrigation District - Phelps System Improvement Project	700	14	Rehabilitation and Improvement
Greater Wenatchee	1,000	20	Rehabilitation and Improvement
Santa Ana Watershed	1,000	20	Distribution System
Buffalo Rapids Irrigation District No. 2 1/	1,400	28	Rehabilitation and Improvement
Columbia Irrigation District 1/	1,000	20	Rehabilitation and Improvement
Colusa County Water District (130) 1/	500	10	Distribution System
Fallbrook Public Utility District 1/	2,440	49	Peak Storage Facilities

Project		Estimated New or Additional Cost	Work Years Generated	Type of Work
Glide Irrigation District (130) 1/		400	8	Distribution System
Ramona Municipal Water District 1/		4,527	90	Peak Storage Facilities
Roosevelt Irrigation District 1/		4,283	87	Rehabilitation and Improvement
Yuba County Water District 1/		600	12	Distribution System
	TOTAL	$42,450	850	
General Administrative Expenses				
Stage 1 of a 3-stage Central Computer System		4,500	100	Acquisition of a Distributed Network of Minicomputer Systems
Non-project equipment		2,000	40	Procurement of equipment and computer facilities
Total		6,500	140	

1/ Included in FY 1983 Budget Amendment

TARGETING FUNDING TO HIGH-UNEMPLOYMENT AREAS

Question. Do you have procedures to insure that high-unemployment areas are targeted and that contractors go to unemployment offices to make these job opportunities available?

Answer. The Bureau effectuates Federal labor surplus area procurement policy by annually establishing goals for setting aside procurements for award in labor-surplus areas. The Bureau also insures that clauses encouraging subcontracting with labor-surplus area concerns and requiring the development of labor-surplus area subcontracting programs are included in its larger prime contracts.

The Bureau has an established procedure whereby all proposed procurements estimated at $10,000 and over are screened to determine the opportunity for total labor-surplus area set-asides.

For fiscal year 1982, the Bureau established labor-surplus area set-aside goals of $125 million, which was 22 percent of our expected total procurement program. Actual contract awards to labor-surplus area concerns that fiscal year totalled $167 million, which was 34 percent of the total procurement program.

To further maximize labor-surplus area opportunities, the Bureau gives preference to labor-surplus area concerns in the case of equal low bids, and gives 6-percent preference to domestic labor-surplus area concerns where evaluating against the prices or foreign firms pursuant to the Buy American Act.

Regarding employment opportunities, the Bureau includes in each solicitation and contract expected to be $10,000 and over, a clause that requires contractors and subcontractors to list all of their suitable employment openings with the appropriate local offices of the State employment service system.

HIGH COST PER JOB CREATED

Question. The committee has heard much criticism regarding the high cost of the jobs created by the investment in water resource projects. How do you respond to such criticism?

Answer. The national investment in water resources development is an investment in capital improvements and not an investment in strictly labor-intensive activities. Therefore, the cost per job created by the capital improvement will naturally be higher, but also will be the long-range national return on that capital investment.

In the case of water resources development under the direction of the Bureau of Reclamation, individual water projects undergo a benefit-cost analysis before the project is funded for construction. The analysis is performed to determine if the national benefits derived from the investment in the water project are greater than the costs.

If it is determined that the benefits derived from construction of the project will not be greater than the construction cost, the project is not recommended for funding.

It is also important to note that approximately 80 percent of the construction costs for Reclamation projects is reimbursable to the U.S. Treasury.

GARRISON DIVERSION PROJECT

Senator ABDNOR. I guess that brings us to the Garrison project.

Secretary WATT. Now, I must tie that to Senator Burdick's arrival, in that we are up against some real opposition. The Garrison project, which we fully support—in fact, we asked for more money from the Congress than we did last year for Garrison, Senator. You gave us $4 million in addition to the carryover and favored increasing this funding to $14 million by reprograming. This year we are asking for $22 million. We believe in the Garrison project. Yet the Garrison project is becoming a focal point for the critics of the water resources development program. As you know, it was defeated in the House of Representatives last time.

We are up against some tremendous battles, Senator Burdick. To talk to you about that is ridiculous because you have lived through those battles. We are seeing a situation where those of us who believe in investing in the future of this country are not always carrying the day. I think it was a mistake for the House to defeat the Garrison diversion project last year—and we find that the South Dakota Congressmen voted against the North Dakota project.

Senator ABDNOR. Not me.

Secretary WATT. Not Senator Abdnor.

POLITICS OF WATER PROJECTS

And we find that repeatedly a Congressman or a Senator thinks that he can vote against every other water project, be a great purist for his special interest cause, and then hold his State immune from investment and development.

Garrison, I think, will be a project. We have got lots of money in the budget for the Central Arizona Project. I have nothing but confidence that the Tucson division will be built on time. We support it. We have asked for full funding. We are up front on it. I take a beating daily in the press on it.

Senator Burdick, I have been up front on Garrison and more aggressive than anybody could possibly be, and you complimented me on that, and I appreciate that.

For the first time in 8 years, we don't have litigation stopping us with the past administration joining in the litigation to stop the construction of Garrison. We have got a battle, and to get a 25-percent increase in appropriations for water resources projects like we are trying to get Congress to do this time is not easy. We will take on all opponents. While I was taking a beating, Senator Burdick and Senator Mark Andrews were also.

RECIPROCAL SUPPORT NECESSARY

You have been faithful to support Garrison, but if we are going to have a North Dakota Congressman vote against a South Dakota project, we are going to lose reciprocity, and we are going to lose the ability to prepare America for the 21st century. I think it's alarming. I always enjoy coming to this committee because you folks see things the way we see things. We don't have partisan Democrat-Republican lines when we are talking about the future of the country when I come to this committee.

Senator Burdick, let me assure you that we are fully pledged. We are calling for a more than doubling—or I guess exactly a doubling for the appropriation for the Garrison project which shows our good faith, again, on that.

I have appointed a mitigation committee. We have finally charged the appropriate people to get the fish and wildlife mitigation people underway. I had a briefing in Colorado in December on that. I was tremendously impressed with Governor Olson's people, the progress made by our fish and wildlife and Bureau of Reclamation people there.

It was a first-class job. I probably anticipated all your questions, Senator.

Senator ABDNOR. I was going to say, the Senator won't have to ask them.

Senator BURDICK. Mr. Chairman, I have nothing to say. [Laughter.]

SUPPORT FOR GARRISON DIVERSION PROJECT

I really appreciate your attitude, and I have appreciated it over the years that we have been working together for Garrison and other projects.

What you say about support of the project generally is also well taken. I know exactly what you mean, I think, as well as you said it.

Senator ABDNOR. Senator Burdick, you can tell the Secretary how well South Dakota and North Dakota are getting along.

Senator BURDICK. This part of North Dakota and South Dakota get along beautifully.

Secretary WATT. It is on the other side of the Capitol that they don't get along so well, and they are the same party, I might add. They vote against it.

Senator BURDICK. It is awfully hard for me to even ask the next question. I have some more questions. I believe your Bureau of Reclamation people will follow you, won't they?

Secretary WATT. Yes.

FUNDING GARRISON DIVERSION PROJECT

Senator BURDICK. I think, perhaps, I will ask the Commissioner the next question, but is there any chance, having received your fine report—and it is difficult to ask this question—but do you expect to request any additional funds through reprograming?

Secretary WATT. Yes, we do. You cannot get ahead of us on Garrison. Our current capability is $11 million, and we have a letter that is now ready for signature calling for $3 million to get us back to the $14 million that we requested for last year.

Senator BURDICK. That is very much appreciated, and I thank you.

Secretary WATT. The Commissioner is whispering in my ear, Senator, that about $14 million is the limit of our capability there.

Senator BURDICK. Will this bring it up to your full capability then?

Mr. BROADBENT. For this year.

Secretary WATT. For this year.

Senator ABDNOR. If there are no further questions for the Secretary, we will let him get on his way. We will hear from Commissioner Broadbent unless you want to testify some more, Mr. Secretary.

Secretary WATT. Thank you.

ADDITIONAL PREPARED QUESTIONS

Senator ABDNOR. There are a couple of other questions on the Water Resources Council and others that I'll place in the record at this point for your response.

We also want to include at the appropriate place material regarding the Interstate Commission on the Potomac River Basin and the Susquehanna and Delaware River Basin Commissions.

[The questions and answers follow:]

WATER RESOURCES COUNCIL

Question. Now, I believe that the continuing resolution (Public Law 97-377), provided funding for activities of the Water Resources Council. What funding level is provided under the continuing resolution and how do you plan on using the funds?

Answer. Public Law 97-377 provided $3,888,000 in new budget authority for the Water Resources Council in fiscal year 1983, the same level of funding as in fiscal year 1982. Funds were provided in fiscal year 1982 to bring to an orderly conclusion the ongoing level B studies ($3,230,000) and for salaries and expenses ($658,000). The Water Resources Council staff was terminated September 30, 1982. It is unlikely that obligations will be incurred for post-termination expenses in excess of other available budgetary resources. Therefore, we have recommended a deferral of $3,888,000 pending final action on the fiscal year 1983 Energy and Water Development appropriations bill.

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

Question. This committee recommended, and the continuing resolution provides, a continued Federal contribution to the Interstate Commission on the Potomac River Basin. However, the 1984 budget again does not contain a Federal contribution. What level of funding is contributed by each signatory State on average each year?

Answer. The average level of funding contributed during the past 5 years by each signatory State and the District of Columbia is shown in the following table:

Average contribution, by State, to the Interstate Commission on the Potomac River Basin—1978 to 1983

Signatory State	*Amount*
Maryland	$54,760
Pennsylvania	16,875
Virginia	60,960
West Virginia	15,598
District of Columbia	35,220

Question. What is the historic average Federal contribution?

Answer. The average Federal contribution during the past 5 years has been $55,000.

Question. Since no funds have been requested for the past 2 years, why do you believe this to be an unwise Federal expenditure, particularly in light of the Commission's role in the improvements that have been made in the water quality and quantity over the past several years? It would appear that the public benefits far outweigh the small Federal cost. Please comment.

Answer. The Commission's contribution to the improvement of water quality and supplies are impressive. The accomplishments of the Potomac Commission are a testament of the ability of the States to cooperate among themselves to find regional solutions to common problems without Federal interference. Some 25 similar interstate compacts exist, and if each were to receive a Federal contribution similar to that appropriated to the Potomac Commission, the Federal cost would be in excess of $1.3 million.

Statement of Joseph D. Gebhardt, Chairman, Interstate Commission on the Potomac River Basin

THANK YOU, MR. CHAIRMAN, FOR THIS OPPORTUNITY TO SUPPORT A FISCAL YEAR 1984 FEDERAL APPROPRIATION FOR THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN. MY NAME IS JOSEPH GEBHARDT. I AM THE CHAIRMAN OF THE COMMISSION AND ONE OF THREE COMMISSIONERS APPOINTED BY THE PRESIDENT. I HAVE WITH ME PAUL EASTMAN, EXECUTIVE DIRECTOR OF THE COMMISSION.

THE PRESIDENT'S FISCAL YEAR 1984 BUDGET RECOMMENDED NO APPROPRIATION FOR ICPRB. WE REQUESTED $68,000 AS THE FAIR FEDERAL SHARE OF THE TOTAL BUDGET OF $588,000. THE ICPRB INCLUDES THREE PRESIDENTIALLY APPOINTED COMMISSIONERS, WHO REPRESENT THE INTERESTS OF THE FEDERAL GOVERNMENT, ONE OF THE LARGEST WATER USERS AND RIPARIAN LANDOWNERS ON THE RIVER. THE FEDERAL SHARE HAS HISTORICALLY BEEN EQUAL TO--NEITHER MORE NOR LESS THAN--THE LARGEST STATE CONTRIBUTION, TANGIBLY SIGNIFYING A FULL AND EQUAL PARTNERSHIP IN A VITAL JOINT MISSION.

THE AUTHORITY FOR THE FEDERAL APPROPRIATION TO ICPRB IS ARTICLE IV OF THE POTOMAC BASIN COMPACT AS AMENDED BY PUBLIC LAW 92-407, 91st CONGRESS, IN SEPTEMBER 1970. IT STATES "THE MONEYS NECESSARY TO FINANCE THE COMMISSION IN THE ADMINISTRATION OF ITS BUSINESS IN THE CONSERVANCY DISTRICT SHALL BE PROVIDED THROUGH APPROPRIATIONS FROM THE SIGNATORY BODIES [THAT IS, DISTRICT OF COLUMBIA, MARYLAND, PENNSYLVANIA, VIRGINIA AND WEST VIRGINIA] AND THE UNITED STATES..." CONGRESS HAS REAFFIRMED ITS ORIGINAL MANDATE BY APPROPRIATING FUNDS TO THE COMMISSION FOR A FEDERAL SHARE EVERY YEAR BEGINNING WITH FISCAL YEAR 1949.

YOU HAVE OUR BUDGET JUSTIFICATION SO I WILL ONLY BRIEFLY HIGHLIGHT TWO MAJOR WORK PROGRAM ITEMS IN THIS SUMMARY STATEMENT.

THE CORNERSTONE FOR THE WASHINGTON METROPOLITAN AREA (WMA) WATER SUPPLY SOLUTION WAS LAID IN JULY 1982 WHEN THE FEDERAL GOVERNMENT, THE STATE OF MARYLAND, THE COMMONWEALTH OF VIRGINIA, THE DISTRICT OF COLUMBIA, THE ICPRB, AND TWO LOCAL WATER UTILITIES EXECUTED EIGHT SEPARATE AGREEMENTS THAT ASSURE THE WMA AN ADEQUATE WATER SUPPLY WELL INTO THE NEXT CENTURY. THE AGREEMENTS MANDATE THAT THE ICPRB SECTION FOR COOPERATIVE WATER SUPPLY OPERATIONS ON THE POTOMAC (CO-OP) IMPLEMENT COORDINATED WATER SUPPLY OPERATIONS FOR THE WMA. THE AGREEMENTS OF JULY 1982 ARE THE RESULT OF A FIVE YEAR INVOLVEMENT OF THE CO-OP STAFF IN DEVELOPING THE TECHNICAL FRAMEWORK FOR THE WATER SUPPLY SOLUTION AND THE START OF THE ON-GOING COMPUTER-BASED MATCHING OF SUPPLY TO DEMAND.

THE SOLUTION OF THE WMA WATER SUPPLY PROBLEM DOES NOT INVOLVE THE CONSTRUCTION OF MAJOR NEW PROJECTS, BUT RELIES RATHER ON THE COOPERATIVE OPERATION AND EFFICIENT MANAGEMENT OF EXISTING SUPPLIES. THE VALUE OF COOPERATIVE OPERATIONS FOR THE WMA HAD BEEN RECOGNIZED BY THE U.S. ARMY CORPS OF ENGINEERS (COE) IN THEIR 1977 NORTHEAST WATER SUPPLY STUDY. THE "STRUCTURAL SOLUTIONS" PROPOSED BY THE COE RANGED IN COST BETWEEN $250 MILLION AND $1,000 MILLION. IN CONTRAST, THE AGREEMENTS REACHED IN JULY 1982 ARE BASED ON THE CONSTRUCTION OF ONE SMALL LOCAL RESERVOIR ($30 MILLION) AND ALMOST COSTLESS, IMPROVED, COOPERATIVE OPERATIONS OF EXISTING FACILITIES USING SOPHISTICATED FLOW AND WATER USE FORECASTING TECHNIQUES, WHICH WERE DEVELOPED AND IMPLEMENTED BY THE CO-OP STAFF. THE BOTTOM LINE IS THAT THE OPERATING PROGRAM, NOW IN PLACE, ELIMINATES THE NEED FOR NEW WATER SUPPLY DAMS IN THE BASIN WHICH WOULD COST AT A MINIMUM, $250 MILLION, AS AGAINST THE TOTAL ANNUAL COST OF THE COMMISSION'S OPERATION OF LESS THAN $600,000 AND THE FEDERAL APPROPRIATION REQUEST OF $68,000.

THE DROUGHT MANAGEMENT SYSTEM BEING IMPLEMENTED BY CO-OP DEPENDS ON 1) EARLY DETECTION OF DROUGHTS, BASED ON LONG-RANGE STREAMFLOW FORECASTS, 2) ACCURATE SHORT-TERM WATER USE AND SUPPLY FORECASTS DURING DROUGHT PERIODS, AND 3) OPTIMAL ALLOCATION OF SUPPLIES ON A REGIONAL BASIS DURING DROUGHT PERIODS.

THE BENEFITS OF COOPERATIVE WATER SUPPLY OPERATIONS FOR THE WMA EXTEND TO THE WATER QUALITY OF THE POTOMAC. WITH THE ASSISTANCE OF THE U.S. GEOLOGICAL SURVEY AND THE U.S. FISH AND WILDLIFE SERVICE, CO-OP HAS DEVELOPED PROCEDURES TO MINIMIZE THE CONFLICTS BETWEEN WATER SUPPLY AND WATER QUALITY. IMPORTANT CONTRIBUTIONS HAVE BEEN MADE TO GUARANTEEING THE RECREATIONAL QUALITY OF THE RIVER IN THE STRETCH OF THE RIVER BETWEEN GREAT FALLS AND LITTLE FALLS AND TOWARD MITIGATING THE IMPACT OF ACID MINE DRAINAGE INTO BLOOMINGTON RESERVOIR IN THE POTOMAC NORTH BRANCH ON DOWNSTREAM SEGMENTS OF THE RIVER.

ICPRB ALSO IS DEVELOPING MATHEMATICAL COMPUTER MODELS WHICH WILL DEFINE THE RELATIONSHIP OF ADVANCED WASTEWATER TREATMENT EFFLUENT, WATER TEMPERATURE, AND FRESHWATER INFLOW, ON DISSOLVED OXYGEN (DO) LEVELS. THE RESULTS OF THESE MODELS HAVE THE POTENTIAL FOR SAVING THE OPERATORS OF TREATMENT PLANTS A GREAT DEAL OF MONEY WHILE, AT THE SAME TIME, MAINTAINING WATER QUALITY STANDARDS IN RECEIVING WATERS.

IN PARTICULAR, THE COMMISSION IS LOOKING AT THE NITRIFICATION PROCESS IN ADVANCED WASTEWATER TREATMENT IN WHICH NITROGEN COMPOUNDS IN THE WASTEWATER ARE OXIDIZED TO REMOVE NITROGENOUS OXYGEN DEMAND. THIS NITROGENOUS OXYGEN DEMAND CONTRIBUTES TO LOW DO PROBLEMS IN RECEIVING WATERS. TOO LOW DO CAUSES THE LOSS OF DESIRABLE FISH SPECIES, THE GROWTH OF NUISANCE ALGAE, AND OFTEN RESULTS IN FOUL ODOR PROBLEMS. NITRIFICATION IMPROVES THE QUALITY OF EFFLUENT AND, CONSEQUENTLY, THE QUALITY OF RECEIVING WATERS. REMOVAL OF NITROGENOUS OXYGEN DEMAND IS ACCOMPLISHED BY HAVING POWERFUL TURBINES BLOW AIR THROUGH THE WASTEWATER. THIS IS, HOWEVER, A VERY EXPENSIVE PROCESS TO OPERATE. AS AN EXAMPLE, AT THE DC REGIONAL BLUE PLAINS SEWAGE TREATMENT PLANT, ONE HUNDRED TWENTY TURBINES, EACH OF 75 HORSEPOWER ARE USED TO INJECT AIR INTO THE WASTEWATER. OPERATING COSTS FOR THESE TURBINES IS ABOUT $8,000

PER DAY. IT IS EXPECTED THAT OUR RESEARCH CAN YIELD SAVINGS IN THIS EXPENSE WITHOUT SACRIFICING WATER QUALITY.

ICPRB EXPECTS TO FIND THIS POTENTIAL FOR CUTTING OPERATING COSTS BY MODELLING THE EFFECT OF TEMPERATURE AND FLOW ON DO. TEMPERATURE CONTROLS THE DO SATURATION LEVEL, AND THE RATES OF CHEMICAL REACTIONS CONSUMING AND PRODUCING OXYGEN. FRESHWATER INFLOW PROVIDES OXYGEN, DILUTES EXISTING OXYGEN DEMAND, AND MAY AFFECT TEMPERATURE. IN GENERAL, HIGHER TEMPERATURES AND LOWER FLOWS RESULT IN LOWER DO LEVELS IN THE RECEIVING WATERS. AS A RESULT, LOW DO IS A PROBLEM TYPICALLY ONLY DURING THE SUMMER; WHILE DURING THE WINTER DO LEVELS ARE AT OR NEAR THE MAXIMUM, IRRESPECTIVE OF NITRIFICATION OF TREATED SEWAGE DISCHARGES.

RECOGNIZING THE HIGHER AMBIENT LEVELS OF DO DURING THE WINTER, SOME OPERATING PERMITS ALREADY ALLOW SEASONAL USE OF NITRIFICATION. HOWEVER, THE DATES SELECTED TO BEGIN AND END NITRIFICATION HAVE BEEN SOMEWHAT ARBITRARILY CHOSEN. OUR MODELS WILL MORE PRECISELY DEFINE WHEN SEASONAL CHANGES IN TEMPERATURE AND STREAMFLOW WOULD REQUIRE NITRIFICATION TO BEGIN IN THE SPRING; AND WHEN IT WILL BE SAFE TO "TURN OFF" NITRIFICATION IN THE FALL. THIS WILL ALLOW NITRIFICATION TO BE USED IN THE SHORTEST POSSIBLE PERIOD OF TIME, CONSISTENT WITH MAINTAINING WATER QAULITY.

CURRENT RESEARCH IS SPECIFICALLY ORIENTED TO WATER QUALITY PROBLEMS IN THE POTOMAC RIVER AND ESTUARY. BUT THE METHODOLOGY WE ARE DEVELOPING FOR THIS PROJECT CAN BE GENERALIZED TO WASTEWATER TREATMENT PLANTS ACROSS THE COUNTRY WITH COMMENSURATELY GREATER SAVINGS IN PLANT OPERATING EXPENSES; AND WITHOUT SACRIFICING WATER QUALITY.

ICPRB PLAYS A UNIQUE INTERGOVERNMENTAL ROLE IN THE POTOMAC BASIN. IT HAS PUT FEDERALISM INTO CONCRETE--AND SUCCESSFUL--PRACTICE FOR 40 YEARS. WITHOUT FEDERAL PARTICIPATION, THERE WILL BE AN EMPTY PLACE AT THE TABLE. FEDERAL PARTICIPATION ENHANCES EFFICIENCY AND EFFECTIVENESS OF

THE ESSENTIAL LOCAL-STATE-FEDERAL RELATIONSHIPS SO VITAL TO THE NATIONAL CAPITAL AND OTHER NATIONAL INTERESTS IN THE BASIN. I FEEL STRONGLY THAT THE BENEFITS TO THE FEDERAL GOVERNMENT FAR EXCEED THE COST OF THE $68,000 APPROPRIATION WHICH WE ARE REQUESTING.

THANK YOU AGAIN FOR THE OPPORTUNITY TO TESTIFY, AND NOW MR. EASTMAN AND I WILL BE HAPPY TO ANSWER YOUR QUESTIONS.

LETTER FROM CHAIRMAN JOSEPH D. GEBHARDT

February 10, 1983

Hon. Tom Bevill, Chairman
Subcommittee on Energy
and Water Development
U.S. House of Representatives
Rayburn House Office Bldg., Rm 2362
Washington, D.C. 20515

Dear Mr. Chairman:

As Chairman of the Interstate Commission on the Potomac River Basin I request the opportunity to appear before your subcommittee to ask the subcommittee's approval of $68,000 for ICPRB in the FY 1984 Energy and Water Development Appropriations Bill.

The authority for the Federal Government appropriations to ICPRB is Article IV of the Potomac Basin Compact as amended by Public Law 91-407, 91st Congress, approved September 25, 1970 (80 Stat. 856). It states, "The moneys necessary to finance the Commission in the administration of its business in the Conservancy District shall be provided through appropriations from the signatory bodies [DC, MD, PA, VA and WV] and the United States..." Congress has appropriated funds to the Commission for the federal share each year beginning with FY 1949.

In my remarks I should like to briefly outline the importance of the Commission's work not only to the Potomac River basin and the Nation's Capital, but also as an example to other river basins to demonstrate the cost effectiveness of the Commission's programs in the area water supply as well as water quality.

Sincerely,

Joseph D. Gebhardt

Joseph D. Gebhardt
Chairman

February 1983

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN (ICPRB)

Fiscal Year 1984 Budget Justification

ICPRB's authority for interstate coordination of water-related activities of federal, state, and local agencies and interest groups is contained in the 1940 Potomac Interstate Compact as amended by the states and approved by Congress in 1970.

ICPRB's major work program areas are:

(1) Coordination of the management of upper basin storage reservoirs (Bloomington Lake and Savage River Reservoir) and downstream water supply withdrawals in the Metro Washington Area through the CO-OP Section (Cooperative Water Supply Operations on the Potomac). ICPRB CO-OP has developed and will continue to operate the computerized analytical programs for cooperative operations of reservoirs and water supply withdrawals to assure water supply reliability, maintenance of streamflows to protect water quality and aquatic ecosystems, and maximization of benefits to other reservoir purposes, i.e., recreation and flood control. This has eliminated the need for additional reservoir storage in the upper Potomac basin until well after the year 2000, thus saving an estimated $250 million as proposed in earlier plans.

(2) Coordination of the Potomac basin surface water quality monitoring network and the review and revision of state water quality standards to insure their compatibility in interstate waters by means of a task force of state and federal representatives; interpretation of effluent and water quality data for use in determining the attainability of designated water uses in stream stretches under greatest stress from point and/or nonpoint pollution sources and in the development of criteria for seasonal operations of wastewater treatment plants to meet water quality standards and reduce costs; development and maintenance of a toxic spill model for the Potomac and major tributaries as an early warning system for water supply intakes; and continued assessment and reporting on water quality trends and progress in the basin towards meeting water quality standards and National Clean Water Act goals.

(3) Continued operation of a Potomac basin public education and information center including publication of the monthly Potomac Basin Reporter focused on basin water quality and water resources problems and programs to provide an information exchange among official agencies and to facilitate effective public participation in federal, state and local agency decision-making; also provision of other information materials, visual aids, and inquiry reference services to public agencies (e.g., schools), citizens organizations and news media by staff and the ICPRB library of Potomac basin technical and general information reports and reference documents.

Tables 1 and 2 attached show the proposed expenditures and contributions for fiscal year 1984 together with actual and budgeted amounts for fiscal years 1982 and 1983.

Table 1

Interstate Commission on the Potomac River Basin
Proposed Expenditures for Fiscal Year 1984
(Including actual and budgeted amounts for FY 1982 and FY 1983)

Major Expenditure Categories[1]	Actual FY 1982	Budgeted FY 1983	Proposed FY 1984[2]
Personnel Salaries and Benefits	$ 414,000	$ 439,000	$ 431,000
Rent, Office Expense, Travel, etc.	78,000	87,000	88,000
CO-OP Section Computer Equipment	15,000	32,000	3,000
Publications	38,000	28,000	35,000
Consultants	11,000	7,000	31,000
Total Budget	$ 556,000	$ 593,000	$ 588,000
Total Staff[3]	13.2	13.8	12.8[4]

[1] Includes expenditures of Section on Cooperative Water Supply Operations on the Potomac (CO-OP Section) organized under Article III of the Potomac Basin Compact and supported by contributions of Metropolitan Washington Area water utilities.

[2] Allows for approximately 5% increase in costs due to inflation.

[3] Includes temporary summer employees (technical aides)

[4] Staff reduced by one person/year but supplemented by part-time consultant.

Table 2

Interstate Commission on the Potomac River Basin
Proposed Contributions for Fiscal Year 1984
(Including actual and budgeted amounts for FY 1982 and FY 1983)

Source[*]	Actual FY 1982	Budgeted FY 1983	Proposed FY 1984[1]
Signatory States			
District of Columbia	$ 35,700	$ 37,700	$ 40,500
Maryland	56,000	58,200	68,200
Pennsylvania	17,200	17,900	20,400
Virginia	63,100	65,600	64,500
West Virginia	22,700	22,600	19,400
States Subtotal	$194,700	$202,000	$213,000
Direct U.S. Appropriation	55,000[2]	55,000[2]	68,000
USEPA Annual Program Grant under Section 106 Fed. Clean Water Act	150,000	118,000	118,000
CO-OP Contribution from Water Utilities[3]	174,700	146,000	141,000
Other Sources (Interest, Pub. Sales, etc.)	55,900[4]	10,000	15,000
Carryover from Previous Year	49,600	124,700	63,000
TOTAL	$679,900	$655,700	$618,000

[*] The Interstate Compact establishing the Commission specifies that it shall be financed "by appropriations from the signatory bodies and the United States", with the pro rata contributions to be "based on such factors as population; the amount of industrial and domestic pollution; and a flat service charge." The formula for state contributions was revised for FY 1984 to allow for population changes in the 1980 census. It includes a flat service charge of $15,000 with 3/4 of the remainder prorated by population in the basin and 1/4 by major industrial and municipal point source pollution. The fair share contribution of the United States has been agreed to equal to the largest of the state contributions due to the impact of the National Capital and the federal lands and other interests in the basin.

[1] Changes are result of changes in formula (see * above) and a 5.4% increase in total state and U.S. contributions to allow for increased costs due to inflation and reduction in annual program grant from USEPA.

[2] Amount appropriated by U.S. Congress; Federal share requested was $62,000 in FY 1982 and $66,000 in FY 1983.

[3] Primarily Washington Suburban Sanitary Commission (MD), Fairfax County Water Authority (VA), and Dept. of Environmental Services (DC).

[4] Includes $42,500 which is the estimated amount of assets to be transferred to ICPRB from the Potomac Basin Advisory Committee dissolved by action of the Governors in May 1982.

September 1982

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

SUMMARY OF ACCOMPLISHMENTS
Fiscal Year 1982 (October 1, 1981-September 30, 1982)

Water Quality Monitoring Evaluation and Assistance

-- The Commission continued supervision and maintenance of the Potomac Baseline Water Quality Monitoring Network throughout the year and compiled data and other information for the biennial Potomac basin water quality report for 1980-81.[1] The Commission's Publications Committee and staff completed an assessment of the report with recommendations to improve its form and content.

-- Staff assisted the Office of Environmental Programs, Maryland Department of Health and Mental Hygiene with the preparation of the Potomac basin portion of the biennial state water quality assessment as required by Section 305(b) of the National Clean Water Act. Maryland has jurisdiction over the North Branch and main stem of the Potomac from the source at Fairfax Stone to the mouth at Chesapeake Bay. The report was completed in September.

-- Staff assisted the Virginia State Water Control Board (VSWCB) in entering additional facility planning information in STORET (water quality storage and retrieval system); provided tabular and graphical quality data analyses and other information to be used in the VSWCB's history of water pollution control being written by Mr. Al Paessler, former Executive Secretary; continued entering water quality data in STORET for the District of Columbia (over 5,000 new data values were entered during this reporting period); responded to several requests for water quality data retrievals from STORET; and continued to fill requests for other water quality information from the public, state and federal agencies and consulting firms.

-- Throughout the year staff participated in the deliberations of USEPA's Standing Work Group on Water Quality Monitoring. USEPA's guidance for monitoring programs is shifting to intensive surveys and biological monitoring with emphasis on statistical reliability of data. USEPA also is recommending state cooperative monitoring programs with industries and municipalities with the cost being picked up by the latter. The intent is for this approach to make up for some of the reduction in USEPA's financial assistance to state and interstate water pollution control programs.

-- The technical editing and preparation of the June 1981 Baseline Water Quality Monitoring and Management Workshop was completed and published during the year.[2] The proceedings included 14 presentations on water quality monitoring, standards, and program management by representatives of all of the basin states, USEPA, USGS, the U.S. Army Corps of Engineers, Hydro Qual, Inc., Metro Washington Council of Governments and ICPRB.

-- Staff chaired an Ad Hoc Committee of the Washington Area Waterfront Action Group (WAWAG) which prepared a report on the potential for bathing areas in the Washington Metropolitan Area.[3] Commissioner Adam Foster (DC) also participated. The report reviews the history of swimming in the area, current standards and quality considerations, eleven suggested locations, and general criteria for further evaluation. It also recommends an evaluation process and schedule beginning in 1982 and culminating in implementation of one or more river bathing sites in 1984 and beyond.

-- Staff participated in the December 1981 Seminar on Development and Assessment of Environmental Quality Standards sponsored by the American Academy of Environmental Engineers at George Washington University. Participation included service on the program committee, rapporteur at the keynote session, and editing of the proceedings.

Basin and Interstate Planning Assistance

Water Quality

-- The Commission participated in the policy and technical advisory committee reviews of the Pennsylvania Department of Environmental Resorces (DER) final drafts of the COWAMP (Comprehensive Water Quality Management Program) for Area #5 which includes Somerset, Bedford, Fulton and Franklin Counties, and Area #3 which includes Adams County, parts of which are in the Potomac basin. The COWAMP plans, which will comply with most of the Federal Clean Water Act planning requirements under Section 208, are expected to be discussed in public hearings and completed for the Governor's certification to USEPA by the end of 1982. The Gettysburg area in Adams County is the most critical area of concern in the Pennsylvania portion of the basin. Water pollution control projects have been delayed for several years by federal environmental impact statement requirements. However projects are expected to get underway during the next year for Gettysburg, Lake Heritage, and Cumberland Township which will remedy pollution problems now plaguing this area comprising the headwaters of the Monocacy sub-basin draining from Pennsylvania into Maryland.

-- In the best sense of fulfilling its responsibilities for basinwide water quality and resources management coordination the Commission formed the Potomac Instream Flow Committee at the request of Maryland Department of Natural Resources. The committee is made up of representatives of State and Federal environmental agencies. The purpose of the committee is to recommend management options for reservoir operations under all conditions. Because operation for water supply purposes is not critical in 90% of the summers, and because operations can have a critical impact on water quality and other resources during those summers, the work of the committee is bound to produce substantial benefits to the people of the basin. The committee is beginning its work by analyzing upstream problems and moving downstream as its upstream recommendations are completed. The committee has already adopted a set of recommendations concerning the operations of the Savage River Reservoir in the Potomac North Branch sub-basin.

-- Staff continues to serve on the Ad Hoc Committee to review development in the Potomac estuary model. The Metro Washington Council of Governments (MWCOG) has expended considerable time and effort in calibrating a new state-of-the-art model for the Potomac estuary. (ICPRB is a participating member of MWCOG's Water Resources Planning Board and its committees). The model will soon be used to develop wastewater management alternatives for the WMA. The assumption made in these analyses and the manner in which results are interpreted and presented are critical if this extraordinarily difficult problem is to be solved. Staff will continue to take an active role in these discussions.

-- ICPRB coordinated matching funds for a time-of-particle travel study for the main stem of the Potomac River in cooperation with the Maryland District of the U.S. Geological Survey (USGS). Preliminary results now available allow us to predict the time of arrival and concentration of substances accidentially spilled into the Potomac. Final results should be available shortly. When these are received staff will implement a computer program designed to provide rapid analysis in emergency situations. The Commission has also recently arranged matching funding for a similar study on the South Branch of the Potomac. This study is being performed by the West Virginia District of the USGS. The Commission is seeking funding for a similar study for the Shenandoah River in cooperation wilth the Virginia District of the USGS.

- The Commission conducted a study to investigate the reasons behind the neutralization of instream acidity (caused by acid mine drainage) by the Upper Potomac River Commission wastewater treatment plant discharge to the Potomac North Branch at Westernport, Maryland.[4] The study produced extremely useful results. It: 1) quantified the acid buffering capacity of the discharge, 2) identified its nature and source, 3) concluded that it will likely remain unchanged and 4) developed a technique for coordinating water quality releases from Bloomington Lake with the discharge to best improve water quality in the North Branch.

- Staff assisted USEPA Region III and the U.S. Fish and Wildlife Service (F&WLS) in their reviews of water quality and other environmental aspects of the U.S. Army Corps of Engineers' intended issuance of a permit for the proposed Little Seneca recreation and water supply dam and reservoir in Montgomery County, Maryland. The project is an important part of the Washington Metropolitan Area regional water supply system. With coordinated operations under ICPRB CO-OP, the system will satisfy projected WMA water demands through the year 2020. As a result of ICPRB's assistance the major environmental concerns were satisfied and the permit issuance was expedited. After surmounting other hurdles, the project groundbreaking was held September 3, 1982.

- Staff completed revisions during the year of the Sewer Expansion Simulation (SES) Model User's Manual for use of Maryland National Capital Park and Planning Commission and MWCOG.[5] The SES model is a tool to aid in the development of regional alternatives for expansion of WMA sewerage systems and sewage treatment facilities.

- The Commission completed a survey of sludge production by major municipal and industrial wastewater treatment plants in the basin. The compilation of data provided by plant managers shows that an average of approximately 560 dry tons of sludge are produced each day, 300 of which is produced by the Metro Washington Washington Blue Plains regional plant. A wide variety of sludge treatment and disposal methods were reported.

- The Commission completed a compilation of information on Clean Water Act grants for construction of municipal sewage treatment plants. It shows that total grants awarded by USEPA in the basin from 1969 through 1981 amounted to about $1.133 billion, of which $899 million has been spent. The amounts for the Metro Washington Area are respectively $832 million and $676 million.

- The Commission initiated and is continuing negotiations with USGS officials and others on a proposed survey of Potomac basin sediment sources and transport. The survey would provide a comparison of current conditions with the results of a similar study and report in 1963 sponsored by ICPRB. A preliminary scope of work was prepared and is being revised. In the meantime staff is searching for sources of funding for the project which would be carried out by the USGS, possibly under its state-federal cooperative program.

Other Water Resources

- Staff completed analysis of current practices and future feasibility of increased supplemental irrigation in the Shenandoah Valley of Virginia and the impacts on the river.[6] The report under preparation includes a discussion of present use of irrigation, potential for increases, the relative costs of irrigation, the alternative of crop insurance for drought conditions and the magnitude of the potential effects on the river.

Project Development and Support

- ICPRB helped organize and joined the Potomac River Basin Consortium of colleges, universities, etc., during the year. The Consortium's objective is to assure the study and appreciation of the social, physical, etc., aspects of the region as a whole, as well as to establish a model for the similar treatment of other major regions of the country. Gilbert Gude, Director, Congressional Research Service, Library of Congress is Executive Director of the Consortium.

-- The Commission developed proposals for potential abandoned acid mine reclamation projects based upon the 1977 U.S. Army Corps of Engineers study of the Potomac North Branch. The costs of the top three priority watersheds in West Virginia were updated to 1982 figures using recent construction cost indices and the latest Office of Management and Budget discount rates for federally financed projects. Recommendations for future abandoned mine reclamation projects supported by the abandoned mine reclamation fund (1977 Surface Mining Control & Reclamation Act) should include these watersheds. Most of West Virginia's allocation from the fund is unobligated and the Commission is assisting with the initiation of a program for the use of a share of the West Virginia allocation to ameliorate the acid mine drainage problem in the Potomac North Branch originating in West Virginia.

-- Staff participated in advisory committee reviews of the activities of the Virginia Water Resources Research Center at Virginia Polytechnic Institute and State University and the District of Columbia Center at the University of the District of Columbia. These centers, as well as others, are having to consider a reduction of high priority practical studies or to find new sources of financial support due to reductions in federal government financial assistance.

Public Education and Information

-- Arrangements for the 1982 Fall Public Meeting, "The Potomac in Washington: Recovery, Reflection and Future Role", (*Potomac Reporter*, Aug/Sept. 1982) were completed with the University of the District of Columbia (and Water Resources Research Center) and the D.C. Department of Environmental Services. The agenda and speakers were confirmed, and letter requests went out for participation in the Potomac Honor Roll, Potomac Papers, and Meeting Exhibits. Promotional efforts were initiated and included a press release mailed early August to all metro Washington newsletters, letters to D.C. Advisory Neighborhood Commissions, members of the Anacostia community, Washington Area Waterfront Action Group, etc. A mailing list of over 500 individuals, organizations, agencies was devised for mailing in October of the Fall Public Meeting program.

-- The four-color Metro Washington Potomac Water Quality and Water Use Poster and Map was designed, printed and distribution and promotion initiated. The poster and map describes the $1 billion clean-up program, the resulting water quality improvement and the enhancement of recreational opportunities afforded by the Potomac and its shoreline in the Washington Metropolitan Area. A special effort was made to encourage area businesses and marinas to display and sell the publication.

-- The Commission implemented the fifth year of the Potomac River Watch program during the period from the first week in June through the Labor Day weekend in September. Nineteen "river watchers" provided information on Potomac River conditions each week. Staff summarized the information on tape for broadcasting by eleven stations each weekend during the summer recreational season.

-- Seven issues of the *Potomac Basin Reporter* were published (The editor's position was vacant for three months of the year). Staff completed the shift of the mailing list to the inhouse computer for efficiency and lower distribution costs. The *Reporter* is distributed free to some 8500 recipients. Numerous *Reporter* articles were excerpted and reprinted in national and regional periodicals.

- Staff reviewed and analyzed the report, "Environmental, Economic, and Political Issues Impede Potomac River Cleanup Efforts." The report was published by the U.S. General Accounting Office (GAO), and was challenged by ICPRB staff for its conclusions. The analysis was submitted to GAO with copies to appropriate representatives in local jurisdictions by the Executive Director. This effort was publicized through a press release to metro Washington newspapers, and at least one two-column article in the Montgomery Journal (2/17/82), "Potomac Said Cleaner than GAO Thinks", resulted.

- Staff organized and promoted the ICPRB CO-OP March 26, Seminar, "Streamflow Forecasting Techniques for the Potomac." The seminar took place at the University of the District of Columbia. Press releases were distributed to Metro Washington newsletters and educational institutions and an article appeared in the February issue of the Reporter.

- Staff completed much of the reorganization of the Commission library with some help from an experienced librarian. Given the limited staff resources available, the new system will be more efficient, easier to maintain, and easier to use by the many outsiders dependent on the library for Potomac basin related reports, etc., as well as the Commission. Good progress also was achieved in updating and organizing the photo resource files.

- Staff conducted interviews with Dr. Abel Wolman, Professor Emeritus, The Johns Hopkins University, to record his recollections about his intimate knowledge and work in the Potomac River basin from 1912 to the present. The interviews were edited and reproduced for distribution on request.

- Staff gave presentations about the Potomac basin and the Commission at numerous meetings of various organizations, i.e, garden clubs, women's clubs, professional and planning organizations, service clubs, etc. They also manned Potomac exhibits or assisted with several Potomac related festivals and exhibitions.

Publications Summary

- Potomac Poster and Map, including a narrative description of the enhancement of the Potomac River and shoreline in the Washington Metropolitan Area achieved by the $1 billion clean-up program, ICPRB, June 1982, ($3.50).

- Seventy Years of Potomac River History, Interviews with Dr. Abel Wolman, ICPRB, February 1982, ($3.25).

- Proceedings of the June 1981 Water Quality Monitoring and Management Workshop, ICPRB, April 1982 (cost of Xeroxing).

- Potomac River and C&O Canal Maps, Antietam Creek to the Potomac Tidewater, Reprinted June 1982 ($4.50).

- Tidewater Potomac Cleanup, "A Decade of Progress", prepared by GKY and Associates for the USEPA and published by ICPRB, April 1982, ($2.50).

- Potomac Basin Water Quality 1980-81, James Rasin, et.al., ICPRB, scheduled for publication, Dec. 1982.

- Other publications authored, co-authored or contributed to by the Commission during the year included:

  Fishing in the Nation's Capital, Washington Area Waterfront Action Group Fishing Committee (J.V. Rasin, ICPRB Aquatic Biologist a member), April 1982.

  Potential For Bathing Areas on the Potomac and Anacostia Rivers in the Washington Metropolitan Area, Washington Area Waterfront Action Group Ad Hoc Task Force, P.W. Eastman, ICPRB, Chairman, May 21, 1982, (cost of Xeroxing).

Potomac River Basin: An Annotated Bibliography, prepared for the Subcommittee on Governmental Efficiency of the U.S. Senate Committee on Governmental Affairs by the Congressional Research Service, Sept. 1981.

Potomac River Basin Regional Planning: The Potomac Experience, prepared for the Subcommittee on Governmental Efficiency of the U.S. Senate Committee on Governmental Affairs by the Congressional Research Service, Sept. 1981.

Potomac River Environmental Flow-by Study, Maryland Department of Natural Resources, Water Resources Administration, (assisted by Daniel Sheer, ICPRB) 1981.

Assuring Water Supply for the Washington Metropolitan Area: Twenty-five Years of Progress, Daniel Sheer, ICPRB, in "A 1980's View of Water Management in the Potomac River Basin," a report by the American Water Resources Ass'n National Capital Section for the Subcommittee on Governmental Efficiency of the U.S. Senate Committee on Govermental Affairs, Nov. 12, 1981.

The Hope of A Basin Commission in Water Supply Management, Daniel Sheer, ICPRB, in the Proceedings of a Symposium on Unified River Basin Management-Stage II, American Water Resources Ass'n, Oct. 4-8, 1981.

Supplemental Irrigation and Effects on the Shenandoah River, Keith Brooks and Daniel Sheer, ICPRB, (in preparation).

Acidity Control in the North Branch Potomac, Sheer, Daniel P., ICPRB, and D.C. Harris, Franklin and Marshall College, PA. (scheduled for publication in the Nov. 1982 Jour. of the Water Pollution Control Federation).

A Point Process Model of Summer Season Rainfall Occurrences, James A. Smith, ICPRB CO-OP, and Alan F. Karr, The Johns Hopkins University, April 1982 (in press, Water Resources Research).

1/ Potomac Basin Water Quality 1980-81, Rasin, V. James, et.al. ICPRB (scheduled for publication Dec. 1982).

2/ Proceedings of the June 1981 Baseline Water Quality Monitoring and Water Quality Management Workshop, ICPRB Tech. Pub. 82-1, April 1982.

3/ Potential for Bathing Areas on the Potomac and Anacostia Rivers in the Washington, D.C., Metropolitan Area, Paul W. Eastman, et.al., ICPRB for the Washington Area Waterfront Action Group, May 21, 1982.

4/ Acidity Control in the North Branch Potomac, Sheer, Daniel P., ICPRB and D.C. Harris, scheduled for publication in the Nov. Jour. of the Water Pollution Control Federation.

5/ Sewer Expansion Simulation (SES) User's Manual, Daniel P. Sheer, ICPRB, Sept. 1981 (Rev. 1982).

6/ Supplemental Irrigation and Effects on the Shenandoah River, Keith Brooks and Daniel Sheer, ICPRB (in preparation).

September 1982

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN SECTION ON COOPERATIVE WATER SUPPLY OPERATIONS ON THE POTOMAC (CO-OP)

SUMMARY OF ACCOMPLISHMENTS

Fiscal Year 1982 (Oct. 1, 1981 to Sept. 30, 1982)

Fiscal Year 1982 has been a year of unqualified success for ICPRB-CO-OP. Our two year work program was completed on time and within the budget. The techniques and procedures developed by CO-OP serve as a basis for the contracts signed on July 22 which provides a long-term low cost assured supply of water for the Washington Metropolitan Area (WMA). Under these contracts CO-OP has been assigned long-term operating responsibility for scheduling water supply releases and withdrawals during drought.

CO-OP has completed its calibration of the National Weather Service River Forecast System. CO-OP's first operational demand model is under review and the second generation demand model will be operational early in FY 1983. Our operations have been integrated with those of the National Weather Service, and we have been routinely providing long range water supply outlooks from May through September. A test release from Bloomington is scheduled to coincide with this year's drought rehearsal which will begin on September 20.

The Advisory Committee which served so admirably in helping develop our operating rules has completed its tasks and been dissolved. CO-OP's Operations Committee composed of the utility managers of the WMA had its first meeting in August (meeting summary attached). The Operations Committee will meet quarterly and review CO-OP's operational activities. Our budget and work program for next year details future activities. First priority will be completion of our technical manuals and our actual operations. We will also seek to refine and improve our operating techniques and tools.

SUSQUEHANNA/DELAWARE RIVER BASIN COMMISSIONS

Question. The fiscal year 1984 budget again proposes the consolidation of the Susquehanna and Delaware River Basin Commissions. Why do you believe this approach offers more efficient and effective representation within the two river basins?

Answer. Increased efficiency results from a savings of $66,000 in fiscal year 1984 alone through economy of operation in eliminating the cost of salaries for two present full-time Federal employees. A single Federal commissioner may also utilize his knowledge about Federal programs and policies in each basin instead of just one, and he may apply knowledge and experience gained from the deliberations of one commissioner directly to the other and thus be more effective and efficient. Also, I think one Federal commissioner would bring continuity of policy between the two Commissions.

Question. Isn't a two-commission concept much better, given the differences in conditions and basin needs?

Answer. There would continue to be two separate Commissions. The only change being proposed would be in the representation of the Federal Government on the two Commissions. Federal decisions will continue to recognize and be tailored to meet different conditions and needs which exist within each basin.

Question. Were the States involved or consulted on this proposed consolidation and, if so, are they supportive? Please provide communications both in support and opposition where applicable by State.

Answer. No, sir. Under the provisions of both Compacts, the signatory State Governors and the President have the sole discretion of appointing their alternate members (commissioners) without prior consultation with each other. Throughout the history of both Commissions, there has never been any prior consultation between any of the parties with regard to their appointments. I might add that the alternate member for the State of Pennsylvania has consistently been a single individual for both Commissions, as has been the Federal member.

Question. What impact will this consolidation have on employment at the two Commissions? Will anyone be RIF'ed?

Answer. There are presently four full-time Federal positions on the two Commissions: that is, two Presidentially appointed U.S. Commissioners and two GS–13 staff assistants. Under the consolidation proposal, there would be two full-time positions—that is, one U.S. Commissioner and one GS–13 staff assistant—plus provision for part-time support.

Based on these given premises, the two present staff support employees to the Commissioners would receive reduction-in-force notices concerning the abolishment of their positions. Both U.S. Commissioners serve at the pleasure of the President and are not accorded rights under reduction-in-force proceedings.

Statement of Warner M. Depuy, U.S. Commissioner, Susquehanna River Basin Commission

Again, it is a pleasure to appear before you. I do this in a dual capacity, in support of the appropriation request for the salaries and expenses for a consolidated Office of the United States Commissioner for the Delaware and Susquehanna River Basins Commissions, and also for the Federal contribution to the Susquehanna River Basin Commission.

This Federal-Interstate Compact Commission was established pursuant to Public Law 91-575 (signed December 24, 1970). The Compact is the vehicle to produce the most efficient service in the public interest in the conservation, utilization, development, management, and control of the water resources of the basin.

The Commission's membership consists of the Governors of the States of Maryland and New York and the Commonwealth of Pennsylvania, and a Federal Member appointed by the President to represent all Federal Agencies. The Secretary of the Interior, James G. Watt, serves as the Federal Member. In addition, the President and each Governor appoint an alternate with identical powers of the Member, including the authority to vote in the absence of the Member. The non-Federal staff of the Commission receives direction from the Members of the Commission through their alternates.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resources development programs for the Susquehanna River Basin. To accomplish this, the Member and the Commissioner must work closely with all interested Federal Departments and Agencies, serving as coordinators to assure that Federal interests are fully informed regarding all water resources development programs for the Susquehanna River Basin. They also represent the Federal interests in all Commission actions relating to the comprehensive plan and the advisability of individual water resources policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

In this budget request, the President is proposing that Federal representation on the Delaware and Susquehanna River Basins Commissions be consolidated. The Secretary of the Interior will continue to serve as Federal Member with an alternate (United States Commissioner) providing representation on both Commissions. There will also be a staff assistant to assist the Commissioner in his duties. In addition to budget savings, it is felt that representation and activities resulting from the consolidation will be more efficient and effective.

An appropriation of $191,000 for fiscal year 1984 is requested to provide for operating expenses of the consolidated Office of the United States Commissioner for the Delaware and Susquehanna River Basins Commissions. This will provide for the salary of the United States Commissioner and an assistant, plus incidental services. This consolidated budget request is $66,000 less than the combined appropriations enacted or included in the pay cost supplemental request for the two Commissioners' offices in fiscal year 1983.

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

A request of $230,000 is to provide for the Federal Government's share of the $1,209,100 current expense budget of the Susquehanna River Basin Commission. The request is a $13,000 increase over the fiscal year 1983 appropriation. The current expense budget covers expenses of the staff and the regular operating programs of the Commission.

Mr. Bielo, the Executive Director of the Commission, is accompanying me today and has submitted a statement to the Committee which briefly outlines some of our achievements. We will be happy to answer any questions you have regarding the Commission's current activities and new program initiatives proposed for fiscal year 1984.

STATEMENT OF ROBERT J. BIELO, EXECUTIVE DIRECTOR, SUSQUEHANNA RIVER BASIN COMMISSION

The Members of our Commission and I look upon this annual appearance before your Committee, not only as an opportunity to request your support of our activities, but also as an opportunity to report briefly on our programs and to express our appreciation for your past support.

Over the years of our existence, I have noted that the Susquehanna is the largest river in the Continental United States draining to the Atlantic Ocean. Its flood and drought modes of flow with highs of 1,000,000 cfs and lows of 1,700 cfs clearly require that if this great river is to effectively serve our region,much needs to be done to manage its vast watershed and thereby help control this valuable resource.

The need for increased understanding and management of land uses as well as water management in the Susquehanna Basin has been very greatly mangified by the release of the Environmental Protection Agency's Chesapeake Bay Program findings. The study findings indicate that the Susquehanna leads all other tributaries in the discharge to the Chesapeake Bay of nutrients such as nitrogen and phosphorus from non-point sources. This finding is in part somewhat misleading in that the Susquehanna is by far the largest contributor of fresh water to the Chesapeake Bay and thus heads the list for nutrient loadings by its sheer volume, not by the actual concentration of nutrients in its waters.

The Commission has accepted a role in starting work to help rectify this situation. However, the magnitude of the problem is such that it will require the cooperation of many agencies, careful coordination of efforts, and targeting of funds to achieve beneficial results. The State Members of our Commission look to the Congress to continue its interest and support of efforts to correct problems that are affecting this unique national resource.

I am pleased to report that we have completed, on schedule, our four-year basinwide Special Groundwater Study which your Committee supported by providing one-half of the necessary funds.

The Groundwater Study produced 15 technical reports, detailed studies of 9 major aquifers and 7 major digital computer models. Overall the study effort enabled development of a new data base compiled from information regarding 9,000 wells, including 2,000 water level measurements, and over 1,500 sets of water analyses.

The models and the findings are now being applied in new water allocation permit reviews, and in one major water pollution case the model helped predict the contamination plume and thus enabled start of corrective recovery measures.

The Commission has continued its efforts to develop water supply storage when and were possible at Federal and State projects. There has been some confusion regarding cost-sharing and the scheduling of repayment of non-federal costs which has delayed forward movement on a much needed water supply storage project.

The Commission has initiated a program of water system infrastructure studies for small to medium size communities in the basin. In fiscal year 1984 we hope to put together a basinwide water supply framework plan. A primary feature of this plan will be a Drought Emergency Program keyed to existing capabilities of local government and the affected states.

While I have touched mainly on water supply efforts, the Commission has continued a considerable amount of work in the area of flood damage reduction. We have stepped up our production of flood stage maps for particularly vulnerable communities, mostly on a matching cost basis, with State agencies and local governments. Our work on the development of flood damage reduction measures for waste water treatment facilities has been continued and has influenced at least one community to make significant design changes at a major new wastewater treatment project. A prime example of the need for this type investigation is exemplified by the case of a new $4.9 million facility ($2.7 million Federal funds), that suffered severe damages from flood waters shortly after it went into operation. In this case the facility design called for all electrical lines and control and operations equipment to be in underground conduits and tunnels. The resulting flood damage to these highly vulnerable facilities exceed $100,000 with a long shutdown period required for repair. Worker safety during flood events at plants with underground facilities is a matter of serious concern. Flood insurance did not cover the losses noted above since over 50% of the value of the structure was below grade.

Inasmuch as flood events will continue to occur and as there are significant advantages to locating wastewater treatment plants along waterways, we believe the Commission's studies in this area will provide long-term benefits.

The programs mentioned are but a few of the Commission's activities over the broad area of water resources management and development. From these examples of our programs I believe it should be quite evident the Commission has continued to use the funds provided it by the States and the Federal Government to transform engineering and management technology into useful products -- products that can be delivered directly to the user at the community level. Few of the Commission's efforts are directed toward the promulgation of new regulations and complex rules.

With these closing comments on our programs, I turn to my assignment here today and that is to request funds to support the Federal share of our operating budget in the amount of $230,000. To date, the President, Pennsylvania and Maryland have supported full shares of $230,000. In a recent meeting with New York officials and legislative members, we received encouragement regarding that signatory's response toward our fiscal year 1984 budget request.

STATEMENT OF GEORGE J. KANUCK, U.S. COMMISSIONER, DELAWARE RIVER BASIN COMMISSION

It is a pleasure to make my first appearance before you. I have submitted a biographical sketch for your information. On April 14, 1982, I was appointed by the President to serve as United States Commissioner for the Delaware River Basin Commission. However, I appear before you today on behalf of the Administration in support of the fiscal year 1984 appropriation requests for salaries and expenses for a consolidated Office of the United States Commissioner for the Delaware and Susquehanna River Basins Commissions, and also for the Federal contribution to the Delaware River Basin Commission.

The Delaware River Basin Commission was created by Compact among the States of Delaware, New Jersey, New York, the Commonwealth of Pennsylvania, and the Federal Government (Public Law 87-328). The signatory parties utilize the Compact to participate jointly in the conservation, utilization, development, and control of water and related land resources of the region.

The Commission's membership consists of the Governors of the signatory states and a Federal Member appointed by the President to represent all Federal agencies. (The Secretary of the Interior, James G. Watt, serves as the Federal Member.) In addition, the President and each Governor appoint an alternate with identical powers of the Member, including the authority to vote in the absence of the Member. The staff of the Commission is comprised of non-Federal employees and receives its direction from the Members and alternates through the Executive Director.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resources development programs for the Delaware River Basin. To accomplish this, the Member and the Commissioner work closely with all interested Federal departments and agencies to assure that Federal interests are fully informed and to coordinate and represent the Federal interests in all Commission actions relating to the comprehensive plan and the advisability of individual water resources policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

This budget request reflects the President's proposal for consolidating Federal representation on the Delaware and Susquehanna River Basins Commissions. The Secretary of the Interior will continue to serve as Federal Member with an alternate (United States Commissioner) providing representation on both Commissions. The United States Commissioner will be assisted by one staff assistant. It is felt the consolidation will result in budget savings and more efficient and effective Federal representation.

An appropriation of $191,000 for fiscal year 1984 is requested to provide for operating expenses of the consolidated Office of the United States Commissioner for the Delaware and Susquehanna River Basins Commissions. This sum will provide for the salary of the United States Commissioner and an assistant, plus incidental expenses relating to personnel benefits, travel, supplies, and other support services. This consolidated budget request is $66,000 less than the combined appropriations enacted or included in the pay cost supplemental request for the two Commissioners' offices in fiscal year 1983.

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

A request of $269,000--the same amount appropriated last year--is to provide the Federal Government's share of the $2,059,700 current expense budget for the Delaware River Basin Commission. The current expense budget covers expenses of carrying out the regular operating programs of the Commission as described in the Justifications statement previously submitted to the Committee.

Mr. Chairman, accompanying me today is Gerald M. Hansler, Executive Director of the Commission, who also has a brief statement. Also with me today is Sharon L. Sita, the Interior Department budget analyst who assists my office on budgetary matters. We will try to respond to any questions you may have regarding the budget requests.

BIOGRAPHICAL BACKGROUND

GEORGE J. KANUCK

Mr. Kanuck was appointed Alternate Federal Member, Delaware River Basin Commission, by the President on April 14, 1982.

From 1979-82, Mr. Kanuck served as a Member of the Pennsylvania House of Representatives while also maintaining a part-time law practice in Allentown, Pennsylvania. He was an attorney with the Worth Law Office in Allentown, 1976-78; Employment Manager and Director of Safety and Security, Oscar Mayer and Company, Inc., Philadelphia, Pennsylvania, 1970-73; and Marketing Representative, Atlantic-Richfield Company, Philadelphia, Pennsylvania, 1967-68.

Mr. Kanuck graduated from the University of Dayton (B.A., 1965) and Suffold University Law School (J.D., 1976). He is married, and has two children. He was born April 26, 1943, in Marion, Indiana.

STATEMENT OF GERALD M. HANSLER, EXECUTIVE DIRECTOR, DELAWARE RIVER BASIN COMMISSION

The Commission supports the Administration's funding level of $269,000 as the Regular Federal Contribution to the DRBC for FY 1984.

Insofar as other Federal agency appropriations which have a direct bearing on water resource matters in the basin, and which are addressed by your Subcommittee, the Commission supports the following Corps of Engineers' line items:

Francis E. Walter Modification - PA	$1,120,000
Lehigh River Basin Study - PA	440,000
Tamaqua Project - PA	725,000
Delaware River Basin Ice Jam Study - NY	100,000
Delaware River Comprehensive Navigation Study - NJ, PA, DE	950,000
Delaware River in Vicinity of Camden - NJ	50,000

The DRBC made significant progress on several fronts during 1982. One of the most important efforts was that in December the Commission completed and submitted the Special Ground Water Study Basinwide Report to the Department of the Interior -- on schedule. The report recommends a comprehensive basinwide ground water management program and is the product of a three-year work effort. Findings and recommendations contained in this report are now being reviewed for adoption into the Commission's Comprehensive Plan, as appropriate.

Equally important is that the Commission anticipates receipt of the Recommendations of the Parties to the U. S. Supreme Court Decree of 1954, concerning water resource management in the basin. Their document will contain 14 interrelated management steps which basically parallel recommendations contained in our Level B Study. The "Good Faith" document, as it's called, will be executed by the Governors of the States of Delaware, New Jersey, New York, Pennsylvania, and the Mayor of New York City.

Incidentally, modification of the Prompton project to include water supply storage and year-round recreation is a major project contained in both the Final Level B Report and the recommendations of the Parties to the Decree. It would be advisable if the Corps could begin preliminary efforts on Prompton's modification as soon as possible. Perhaps this Subcommittee might query the Corps in that regard, i.e., their capability. I realize that my request concerning the Prompton project is not in the President's budget. However, I have been specifically directed by Commission resolution to seek funds for modifying that project.

I thank you for this opportunity and will gladly answer any questions or submit any further information.

BUREAU OF RECLAMATION

STATEMENT OF R. N. BROADBENT, COMMISSIONER

Senator ABDNOR. Commissioner, I think it is time we turned to your program.

Mr. BROADBENT. Mr. Chairman, we have a slide presentation. We will try to go through it just as quickly as we can, if that is all right.

Senator ABDNOR. Fine, you bet.

PROPOSED FISCAL YEAR 1984 PROGRAM

Mr. BROADBENT. Mr. Chairman, we appreciate this opportunity to report to you on Reclamation's activities and the principal allocations in our proposed program for fiscal year 1984.

Facing the dichotomy of making our contribution to reducing the Nation's debt while at the same time moving ahead on Reclamation programs, presents one of the most difficult tasks familiar to many in the Federal Government.

PROGRAM ACCOMPLISHMENTS

However, the Reclamation program has distinguished itself among Government programs by constructing projects that will return to the U.S. Treasury about 84 percent of the cost invested. Our accomplishments are a good indicator of the contributions Reclamation is making to our Nation. The 1981 statistical data, the latest available, show:

Hydroelectric generation amounted to 47 billion kilowatt-hours, an equivalent of 85 million barrels of oil.

Irrigation water deliveries totaled 27.2 million acre-feet and municipal and industrial water deliveries totaled 2.7 million acre-feet to serve some 19 million-plus people.

Flood control benefits amounted to $111 million.

Reclamation project reservoirs and other facilities supported over 75 million visits for recreation.

Food, fiber, and forage crops produced totaled $6.7 billion.

Electrical energy revenues were $382 million, an 8-percent increase over 1980.

In 1982, 12,700 work-years of contractor employment were utilized.

Activities relating to Reclamation projects have contributed $3.1 billion in Federal tax revenues; State and local revenues were approximately $1.4 billion.

The soundness of the investment in the Reclamation program is well proven by its past. The immediate and long-term needs are well documented to support long-term water resources development.

FISCAL YEAR 1983 BUDGET REQUEST

Before I talk to you about our fiscal year 1984 request, I want to spend a few minutes discussing where we are today. Our original 1983 request was $950 million but was increased $20 million by an amendment for construction and loan new starts for a total of $970 million.

EFFECT OF FUNDING UNDER CONTINUING RESOLUTION

Under the continuing resolution, total funds available were $795 million, or a reduction of $175 million. Needless to say, our program is considerably different than what we anticipated.

In construction, we postponed the award of over 100 contracts, with three-fourths of them being slipped into 1984 or later. The capability to deliver benefits and start receiving revenues under the repayment contracts has slipped accordingly. On two major features, salinity work under title I and the Tucson division of CAP, the completion dates slipped about 2 years, and on seven other projects the slippage is 1 year or more.

Under the O&M program, the levee system work on the lower Colorado River was again delayed; installation of emergency bypass cables at Yellowtail powerplant was delayed, which means that if existing cables fail, there will be a 2-year downtime and $20 million in revenues lost; and dam safety field investigations, installation of instrumentation, and preparation of inundation maps, all related to our dam safety program, will slip 1 year or more.

In addition, several other critical maintenance and replacement items were postponed which further contributes to putting our O&M program on a breakdown-repair system rather than a preventative maintenance type system. This reduces the reliability to continue to make adequate power and water deliveries.

In the general investigations program, several high-priority project investigations have been delayed, and some engineering and scientific studies, including those related to dam safety and water conservation, have been slipped to future years. This means some critical needs in the arid West will not be met in a timely manner.

The loan program was the most severely impacted with a 35-percent reduction. Of the 11 ongoing projects, 3 were to be completed in 1983; but with funding severely reduced, only 2 can be completed. The other nine were stretched out.

We have deferred most scheduled purchases of nonproject equipment, including the replacement of the obsolete central computer system.

As you can see, there have been some significant impacts to our fiscal year 1983 program because of the continuing resolution.

COMPARISONS OF RECLAMATION FUNDING

I want to point out a few comparisons about Reclamation funding over the last couple of years. The funds available under the Fiscal Year 1983 Continuing Resolution is only 1 percent greater than the fiscal 1982 budget. The 1984 request shows an increase of 25 percent over the

1983 Continuing Resolution, but compared to our 1983 request, it is a modest increase of only 2 percent, excluding trust funds.

FISCAL YEAR 1984 BUDGET REQUEST

Now let us look at our proposed fiscal year 1984 budget request which totals about $1 billion—$700 million would go for construction; $145 million is for O&M; $41 million would go to the loan program; $32 million would be for general investigations; $1 million is for the emergency fund; $53 million would be for general administrative expenses; and $30 million for trust funds and permanent appropriations.

CONSTRUCTION PROGRAM

The construction program of $700 million will fund work on 80 multipurpose projects and 1 preconstruction planning project. This includes second-year funding for two new starts included in the 1983 budget amendment. A breakdown of the construction budget, excluding the application of $63 million in underfinancing, is as follows:

Regular project construction, $684.9 million; rehabilitation and betterment, $35.7 million; safety of dams, $17.7 million; drainage and minor construction, $15.9 million; recreation and fish and wildlife, $7.6 million; and preconstruction planning, $0.6 million.

Central Arizona Project

The budget proposal allocates $166 million for the Central Arizona Project. The Phoenix headquarters complex will be completed. Construction will continue on the Granite Reef and Salt-Gila aqueducts and associated pumping plants, the transmission division, and the supervisory control system. Construction will be initiated on the non-Indian distribution systems, the Indian distribution division, and a small segment of the Tucson aqueduct.

Preconstruction activities will continue on the Indian distribution, Tucson, regulatory storage, and Gila River divisions and the non-Indian distribution systems.

In fiscal 1984, all construction contracts for delivery of water to the Phoenix and central Pinal County areas through the Granite Reef and Salt-Gila aqueducts will have been completed or will be underway. Water delivery to the Phoenix area is still scheduled for 1985.

Central Utah Project

Funding for the Central Utah Project amounts to about $105 million. Of that, $102 million is planned for the Bonneville unit. Construction will continue on the Upper Stillwater Dam and Stillwater Tunnel. Contracts will be awarded to initiate work on other features such as remedial work and riprap replacement at Soldier Creek Dam, North Fork siphon, and other minor features.

Construction will continue on Jordan aqueduct-section 4 and Alpine aqueduct-section 3.

Funding will also permit acquisition of land and contract awards for relocation of gas lines and U.S. Highways 40 and 189 in preparation for Jordanelle Dam and powerplant.

Studies will be completed on the Diamond Fork power system to determine the feasibility of pumped-storage development.

Central Valley Project

The funding request for the Central Valley Project amounts to $93 million. On the San Felipe unit, $73 million will permit construction to continue on the Pacheco pumping plant and Santa Clara conduit. Contracts will be awarded for the Coyote pumping plant, section 2 of the Hollister conduit, San Justo Dam, and sections 1 and 2 of Pacheco conduit.

The Sacramento River division will take $12.3 million. Construction will be completed on several features of the Tehama-Colusa Canal distribution system while contracts will be awarded for Westside and Glenn Valley districts' distribution systems and the remaining Colusa service facilities.

Columbia Basin Project

The budget request for the Columbia basin project is $56 million. Construction will be completed on the 13,700-acre block 26 irrigation facilities. This is the last block of land to be developed under our existing repayment arrangements. The remaining acreage to be developed will require amended repayment arrangements at a considerably higher price for water before construction can get underway

To accommodate the operation of the third powerplant, work will continue on the downstream bank stabilization to prevent damage by the fluctuating water levels during the powerplant's peaking operations.

McGee Creek Dam, Okla.

In Oklahoma, construction of McGee Creek Dam and aqueduct will continue with the funding request of $40.6 million. Ongoing activities include the construction of the dam, pumping plant and aqueduct, and acquisition of land and rights. Relocation of county roads, reservoir fencing, and transmission facilities will be completed. More than 200 new jobs have been created in southern Oklahoma by the project, achieving some of the goals of a rural development program.

Dolores Project, Colorado

In Colorado, the Dolores project will require $37 million. The McPhee Dam embankment will be completed in fiscal year 1984 as well as the work on Dolores tunnel and canal and other minor features. Work continues on the Great Cut pumping plant, the Dove Creek Canal, and various other features.

DALLAS CREEK PROJECT, COLORADO

Funding in the amount of $16 million permits continued construction on Ridgway Dam and Reservoir, features of the Dallas Creek project in Colorado.

SAN LUIS VALLEY PROJECT, CLOSED BASIN DIVISION, COLORADO

Funding of $15 million is to continue construction on the Closed Basin division of the San Luis Valley project in Colorado. Activities include drilling salvage wells, construction of canals and laterals, and related facilities. The recovery and delivery of good quality water is required to assist Colorado in meeting its commitments under the Rio Grande Compact.

NORTH LOUP DIVISION, NEBRASKA

In Nebraska, $32 million is proposed for the North Loup division. Construction of the second and third stages of Calamus Dam and county road relocation will continue. Work will also continue on all sections of the Mirdan Canal. A reservoir clearing contract will be awarded. Preconstruction work on other features will continue.

GARRISON DIVERSION UNIT, NORTH DAKOTA

In North Dakota, $22.3 million is needed for construction activities which will focus on the principal supply works and related facilities of the Garrison diversion unit but limited to those that will not affect Canada. Funds will be used for the purpose of purchase of right-of-way for Lonetree Dam and Reservoir as well as for the construction of the dam itself. Construction on the Oakes test area pumping plant and drainage system will be completed and an award will be made for the Oakes distribution system. Construction will continue on the New Rockford Canal.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS

Under title I of the Colorado River Basin Salinity Control Projects Act, we are requesting $22 million.

This will allow continuation of work on the pretreatment system and related facilities, fish and wildlife mitigation measures, and the irrigation efficiency improvement program in the Wellton-Mohawk Irrigation and Drainage District. No new contracts will be awarded during the year.

To further our work under title II of the act, we are requesting $11 million in fiscal year 1984. About one-half of this will be earmarked to continue the deep well injection testing and other evaluation activities at the Paradox Valley unit. Installation of moss and trash screens on the Grand Valley Canal will be completed as will the construction work on the Grand Valley lateral system.

CHIEF JOSEPH DAM PROJECT, OROVILLE-TONASKET UNIT

The Oroville-Tonasket unit on the Chief Joseph Dam project will require $13.4 million in fiscal year 1984. Three pumping plants and the associated pipeline distribution system replacement will be completed. A contract will be awarded on the Osoyoos Distribution System for similar work.

BRANTLEY PROJECT, NEW MEXICO

An amount of $12.7 million in fiscal year 1984 will allow construction to continue on the Brantley project in New Mexico. A contract to relocate the Atchinson, Topeka, and Santa Fe Railroad will be awarded and relocation of U.S. Highway 285 will continue. Specifications for Brantley Dam will be completed to permit an award of a construction contract early in fiscal year 1985. Brantley Dam, just north of Carlsbad, will replace McMillan Dam which has been declared unsafe.

HEADGATE ROCK HYDROELECTRIC PROJECT

Funding has been provided in fiscal year 1984 for the two construction new starts announced last fall. The $11 million for the Headgate Rock hydroelectric project will permit work to continue for later installation of three turbine generating units in the control gates on the existing Headgate Rock diversion dam.

BUFFALO BILL DAM MODIFICATION, WYOMING

On the Buffalo Bill Dam modification, $3 million will be used to continue work on raising the dam 25 feet and constructing a new 20-megawatt powerplant. The State of Wyoming has committed $47 million, or 43 percent, toward the cost of this project.

NUECES PROJECT, TEXAS

The Nueces project became operational in June 1982 with initial reservoir filling. We have programed $8 million to continue installation of stream monitoring equipment, fishery management activities, and construction of recreational facilities such as the boat ramp.

Completion of all activities is scheduled for 1985. This will fulfill the Federal Government's commitment and allow the entire project to be turned over to the operating entity.

FRYINGPAN-ARKANSAS PROJECT

The amount of $7 million will complete work on the second unit at the Mount Elbert pumped-storage powerplant, modifications to Twin Lakes Dam, and drainage work at Mt. Elbert Forebay Dam, all features of the Fryingpan-Arkansas project. Unit 2 will go on line in May 1984 to supply an additional 100,000 kilowatts of electric power.

SAFETY OF DAMS PROGRAM

Our safety of dams program funding request for fiscal year 1984 is $17.7 million. About $13.5 million is for preconstruction and onsite construction work involving 10 dams. The balance is required for administration of the program, preparation of modification reports, and preconstruction planning activities.

REHABILITATION AND BETTERMENT OF EXISTING PROJECTS

The rehabilitation and betterment portion of the construction program amounts to $35.7 million, involving 23 projects.

The work to rehabilitate the Orchard Mesa pumping plant and canal structures in Colorado will be completed. The largest R&B job is in Washington to rehabilitate the distribution system of the Yakima-Tieton Irrigation District. One of the new R&B projects in fiscal year 1984 is the Harlingen Irrigation District. Improvements to system operations will result from the canal lining and pipeline work to replace the existing unlined canals and laterals.

DRAINAGE AND MINOR CONSTRUCTION

The drainage and minor construction portion of the construction program will require $16 million for work on 24 projects or units with completion of 6 of them. Some of the funding will continue on seepage control work at Foss Dam, Okla.

Work will also continue on the Farwell unit drainage program in Nebraska, including some subsurface drain construction. The control system on the southern Nevada water project will be completed and operations turned over to the Colorado River Commission. On the Washoe project, construction work will continue on the Stampede powerplant and switchyard and modification of the Pyramid Lake fishladder.

LOAN PROGRAM

We are requesting $41.5 million for the loan program. In addition to continuing the projects now underway, this funding provides for the continuation of the loan new starts included in the fiscal year 1983 budget amendment. Most of the work planned involves either construction or rehabilitation of water conveyance systems similar to work on Hidalgo County Irrigation District No. 1 which will be completed this year.

Eight of the projects in the loan program are in California and require a total of about $25 million in 1984. Most of the work will be pipeline installation, but the Fallbrook Public Utility District work will involve raising the existing dam by 50 feet and enlarging the reservoir.

OPERATION AND MAINTENANCE

We are requesting $145.1 million for the operation and maintenance program in fiscal year 1984.

A major portion of the funds are needed for the normal operation of reserved works on 32 projects, for associated programs, and for scheduled maintenance.

The most significant activity, other than normal maintenance and operation, is the uprating and generator rewinding at several of our powerplants. Some of the applied revenues will be used on similar activities. When completed, the uprating activities ongoing in 1984 will increase installed capacity by about 120 megawatts.

Because of events during the last few years, including the 1983 Continuing Resolution, we will be directing our attention to essential maintenance that has been deferred from previous years due to budgetary constraints.

Another major activity will be the continuation of the levee armoring and protection program along the Lower Colorado River.

We continue to be concerned about the condition of some of our power and water delivery systems and are making all the adjustments we can to make the systems and facilities as reliable as possible.

GENERAL INVESTIGATIONS

The fiscal year 1984 request for all the various activities that make up the general investigations account totals $31.8 million. The major components are $20.8 million for plan formulation and advance planning studies, $4.7 million for atmospheric water resources management program, $5.2 million for program-related engineering and scientific studies, and $0.5 million for the national water research program.

There is a total of 42 plan formulation investigations of which one, the Colorado River water quality improvement program, has 15 individual segments.

There are 36 investigations that will be continued from fiscal year 1983. Considerable emphasis will be on increased energy production such as developing peaking power capacity by adding units at the outlet works at Crystal Dam in Colorado and Flaming Gorge Dam in Utah.

The emphasis on continuing as well as the new investigations includes energy production, municipal and industrial water supplies, irrigation, water quality, and Indian water resource development.

NEW PLAN FORMULATION STUDIES

There are seven new plan formulation studies, one of which is under the Colorado River water quality improvement program. They are: The All-American Canal relocation and the New Melones conveyance system in California; the Texas Big Sandy, Bedias, and San Jacinto River projects in Texas; the Blue Holes Reservoir study in Wyoming; and the lower Virgin River unit in Nevada. The All-American Canal relocation, Blue Holes, and New Melones conveyance system studies will concentrate on meeting irrigation needs.

ADVANCE PLANNING

Advance planning work that became a part of general investigations last year will be continued. Three new studies to be started in fiscal 1984 are the Lake Andes-Wagner unit in South Dakota; the lower Gunnison basin unit in Colorado; and the Marias-Milk project in Montana. The lower Gunnison basin unit study will develop a plan to eliminate winter stream flows to meet livestock needs in Delta and Montrose Counties and thus reduce salinity pollution in the Colorado River basin.

The Bureau's investigation on the wind-hydroelectric energy integration study in Wyoming will be completed during 1984. Dedication ceremonies, which included initial operation of one of the two prototypes, were held last September.

We are monitoring and modifying the new planning process and hope we can work out an acceptable procedure that will reduce the study time, eliminate some burdensome and time-consuming steps, and reduce project costs.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM

The atmospheric water resources management program portion of the general investigations appropriation is $4.7 million. We will be concentrating on the Sierra cooperative pilot program which will be in the second year of the total 5-year program. Also efforts will be directed toward plans, designs, and legislative authority for supplementing the water supply in the Colorado River basin.

ENGINEERING AND SCIENTIFIC STUDIES

The program-related engineering and scientific studies portion of the general investigations appropriation will require $5.2 million in fiscal year 1984. This program has been a tremendous aid to our planners, designers, and project operators to develop and operate our complex projects more efficiently and effectively. The primary emphasis is on developing and implementing better methods and techniques for managing available water supplies and conserving existing supplies. Significant financial savings have resulted from recent studies conducted under this program, particularly those related to our dam safety program.

NATIONAL WATER RESEARCH PROGRAM

The national water research program is new to Reclamation this year and has been included under our general investigations appropriation. The amount required in fiscal year 1984 is $470,000. This was the amount estimated to close out the remaining activities transferred to us from the former Office of Water Research and Technology. You are aware of the $6 million appropriated in fiscal year 1983 under the Interior and Related Agencies appropriation.

We will continue to try to solidify this program and continue some high-priority work that will contribute to finding solutions to some of our Nation's critical water problems.

GENERAL ADMINISTRATIVE EXPENSES

The fiscal year 1984 request for the general administrative expenses is $53.4 million, a significant increase over the $40.7 million available in fiscal year 1983 under the continuing resolution. This appropriation finances the overall managerial responsibilities of the Bureau, plus the procurement of major nonproject equipment largely related to our overall computer support system. This large increase will allow us to continue our management system as currently set up and purchase the equipment necessary to meet our mission objectives.

MEETING THE NATION'S WATER NEEDS

We have discussed the potential for a real water crisis in the near future. The question remains: Where will the water come from when it is needed? Industry, farms, people, et cetera, continue to pollute our rivers and lakes and drain the underground water supply. Fresh water may soon become this planet's most threatened and precious resource. Our aim is to keep the critical water supply issue in the forefront, to recognize State supremacy over water rights, and to get it properly prioritized among the Nation's needs as the budget is considered. We feel the 1984 budget presented for the Bureau is in line with the economic recovery plan and allows us to continue to move forward in meeting some of the Nation's water needs.

I will be happy to respond to any questions you may have.

FUNDING FOR RECLAMATION PROJECTS IN THE JOBS BILL

Senator ABDNOR. Thank you, Commissioner, for your presentation. Of course, you realize what water can do if it is available. In fact, we are all a bit envious and wonder where my State has been all these years. You might be able to do something about that for the future.

WEB PIPELINE PROJECT, SOUTH DAKOTA

Along that line, the Secretary did indicate that the funding for the reclamation projects is likely to be included in the jobs bill. If it is not, would you consider additional funding for the WEB project?

Mr. BROADBENT. Our input into the jobs bill has been just to furnish a basic capability list. As I understand it, OMB and the administration and members of both leaderships of both Houses are working on that jobs bill.

We hope they will consider it in their deliberations.

Senator ABDNOR. Fine. If they will, are you ready to go? I mean, the WEB project is ready to go?

Mr. BROADBENT. As far as I know, yes, sir.

Senator ABDNOR. We had $1.9 million in previously appropriated funds.

Mr. BROADBENT. WEB is on our proposed list for the jobs bill, yes, sir.

Senator ABDNOR. So you feel that you can use additional funding?

Mr. BROADBENT. Yes, sir.

Senator ABDNOR. Senator Stennis?

VALUE OF WATER

Senator STENNIS. Thank you, Mr. Chairman.

Mr. Commissioner, I am glad to hear your attitude toward your work, and I commend you highly.

You people in the West know the value of water. We have learned more about it ourselves down in Mississippi. I have been on this subcommittee a long time and I marvel at what you have done with so little water.

You have my support.

On this jobs matter, of course, this committee is bound by whatever the law says, and you are, too. It is a wonderful chance. I imagine you have some ready-made work there that could put a lot of people to work.

Mr. BROADBENT. Well, we hope so.

Senator STENNIS. Incidentally—and I should have mentioned it to the Senator—but we don't want to forget the Natchez Trace down home. That is a very valuable parkway that we treasure very highly. It is almost finished, too, by the way. You get these jobs in there, why, we are going to be able to point out to you where you judiciously spent some of that money.

Anyway, I am for you on your program as a whole and always have been. I get to see you and where you go with your work.

Mr. BROADBENT. It has been a pleasure.

I know Reclamation has enjoyed working with you over the years, and we look forward to working with you for a lot more years, Senator.

Senator STENNIS. Thank you.

That is all I have, Mr. Chairman.

Senator ABDNOR. Senator Burdick?

Senator BURDICK. Thank you, Mr. Chairman.

ATMOSPHERIC WATER RESOURCES RESEARCH

As you may recall, this committee included $650,000 for fiscal 1983 to continue HIPLEX-related research and aircraft operations in 1983. The House report included $550,000 for this purpose. The continuing resolution under which the Bureau is now being funded directed that:

> In order to provide greater program direction, agencies under the jurisdiction of the Energy and Water Development Subcommittee are directed to use House Report 97-850 and Senate Report 97-673, which accompanied the 1983 appropriation bills in implementing the provisions of this resolution.

Although congressional intent in this matter seems quite clear, I am told that the Bureau does not intend to provide these funds to the HIPLEX program which, as you know, is very important to the University of North Dakota. In fact, I have been informed that it is the Bureau's position that if the HIPLEX were funded, it would be necessary to terminate other ongoing research projects affecting the university.

I think the situation, as I have described it, speaks for itself.

Can you comment on this matter and explain to the subcommittee your intent with regard to funding HIPLEX in the current fiscal year?

Mr. BROADBENT. Yes, sir, Senator Burdick.

As you are aware, when we came to operating under the continuing resolution for 1983, there was about $4 million less in the general investigations program than we would have had under the President's proposed budget. With that cut of $4 million, we terminated many of our studies. One of them is the HIPLEX study.

I guess we might be prevailed on to really look at it again, but we suffered when we took that $4 million loss. We took it in the first quarter of fiscal 1983 and had to make a reduction of about $4 million in our proposed program. It has been very tough on all of our programs.

We terminated part of our work in the Sierra program and in other programs that we had.

Senator BURDICK. Is the funding of HIPLEX, does that have anything to do with other research projects at the University of North Dakota?

Mr. BROADBENT. No.

Senator BURDICK. They are separate and distinct?

Mr. BROADBENT. Yes, sir. Well, all of them are in the same appropriation. But the HIPLEX program is separate and distinct from the other parts of the program.

Senator BURDICK. I see. And that is the one that you are opposing?

Mr. BROADBENT. Well, the administration in 1982 recommended the HIPLEX program be cut out. It is my understanding that it has been written in for several years by the Congress. Before I came, they made a determination in the administration to terminate the program.

We will have terminated all our studies and the studies will be complete this year.

Senator BURDICK. That means a termination of the program?

Mr. BROADBENT. Yes, sir.

JAMESTOWN DAM

Senator BURDICK. It is my understanding that the Jamestown Dam and the Heart Butte Dam were scheduled for maintenance work in fiscal 1984 at a combined cost of about $70,000.

Can you tell me why funding for these two projects was not included for the budget and whether you intend to request funds at a later date?

Mr. BROADBENT. The Jamestown Dam is part of our operation and maintenance budget, which took a reduction of about $21 million from the President's budget request.

In looking at the Jamestown Dam, we felt that was not a critical safety measure right now. We do intend to do that work in 1984.

HEART BUTTE DAM

The Heart Butte Dam is a dam that was going to be repaired under our safety of dams program. We don't have new safety of dams legislation. There are no new safety of dams programs in 1984. One in 1983 was written in by Congress, which is the Guernsey Dam. We really need new authorizing legislation for safety of dams to increase the ceiling. If we are going to do any safety of dams work, we need to work out the cost-sharing arrangements that have been discussed by this administration.

COST SHARING

Senator BURDICK. Where is the cost-sharing proposal right now?

Mr. BROADBENT. I am going to turn that one over to Assistant Secretary Carruthers, if I may, Senator Burdick.

Mr. CARRUTHERS. We have opened up a comment period on cost sharing for new projects. The Secretary sent out a number of letters, particularly to the Governors and water interests, asking them to tell us by March 25 what they think the cost-sharing arrangements ought to be. To date, I think we have received about 18 replies to the Secretary's inquiry. I would suspect that the Cabinet Council on Natural Resources and Environment will make another recommendation to the President shortly after that, sometime in April or May.

Senator BURDICK. Do you have any inkling of what that recommendation will include for those projects that have been authorized for many years?

Mr. CARRUTHERS. The cost-sharing proposal that we submitted from the working group last year dealt mainly with new projects, and we tried to develop a flexible cost-sharing proposal that would allow us to accommodate commitments; for example, in the Pick-Sloan project or the Upper Colorado River basin. There will be a series of projects that are in transition where we might have to have cost sharing, but it might not be the same level of cost sharing that we anticipated when we were offering the project.

I think many of these are going to have to be negotiated, because several of them are commitments made by the Congress and signed by the President.

Senator BURDICK. That is certain to be true. Some of these projects had been authorized 14, 15 years ago and a lot of preliminary work has been done. It is just a question of starting construction.

I think it would be rather unfair to apply cost sharing to those.

Mr. CARRUTHERS. Senator, we will probably seek a partnership arrangement with States and other interests on these projects. The strictest application of cost-sharing guidelines may not be possible on those, but I would be less than candid with you if I did not suggest that we will seek cost-sharing arrangements on these projects.

Senator BURDICK. I must be candid, too. There will be some resistance if you apply the new policy to these old projects.

Mr. CARRUTHERS. The oldest cost-sharing projects are in the Congress, and we respect that.

Senator BURDICK. Anyway, we are not in the final stages, are we?

Mr. CARRUTHERS. No, it will be 3 months before we will be concluding that. Cost sharing on safety of dams is a separate question and is not the same as the cost sharing for new projects.

Senator BURDICK. Thank you.

FUNDING IN JOBS BILL

Mr. BROADBENT. If I could, I would like to speak to Senator Abdnor on the jobs bill. We understand that there is discussion that not only might we get some construction money in the jobs bill, but we might get some O&M money. If we get some O&M money, it will enable us to do the Jamestown Dam and one or two of those we are talking about.

Depending on how that legislation is written, it may allow us to do several things.

Senator ABDNOR. Good.

Commissioner, I hope it does work out that way.

NEW PROJECT AUTHORIZATIONS

Commissioner, regarding Corps programs under the jurisdiction of the Public Works Committee, actually, there has been very little in the way of new authorizations over the last number of years, as you are probably aware.

Our budget has been dropping. I don't know if we have projects on the drawing boards or ready to go. What is the situation with the Bureau of Reclamation? Do you have projects down the road in the pipeline?

Mr. BROADBENT. We hope so, Senator Abdnor. We have two that were requested in the fiscal year 1983 budget amendment, Headgate Rock and Buffalo Bill Dam modification.

We also have five possible new construction starts in 1984, besides numerous new loan starts.

CONSTRUCTION NEW STARTS

Those five construction new starts are Animas-LaPlata in Colorado; the Narrows unit in Colorado; Palisades powerplant in Idaho, which is a hydroelectric project; Hoover Dam uprating and facility improvements, which includes hydroelectric uprating, and some safety facilities at Hoover Dam; and the Santa Margarita project in California. The latter is primarily a water supply and flood control project for the marines at Camp Pendleton with additional water supply for irrigation districts around Camp Pendleton.

Senator ABDNOR. Is this still in the study stage or is it getting off?

Mr. BROADBENT. Those are projects that we know are going to be introduced for authorization this year or else they already have authority for construction.

Senator ABDNOR. And you are looking at some—you have possibilities that you are looking at and starting to bring along, are you?

Mr. BROADBENT. We are hopeful that some of those will move in some kind of a message to you this year for inclusion in our 1984 appropriation.

Senator ABDNOR. I think the Assistant Secretary wants to clarify.

CENDAK STUDY

Mr. CARRUTHERS. The Senator wants some assurance that we are working on CENDAK, for example, and some assurance we are thinking about the South Dakota water deliveries study in South Dakota and North Dakota.

Mr. BROADBENT. I don't think there is any question about that. I think in working with the State of South Dakota—the Governor and his people—we have accelerated those studies. We are moving just about as quickly as can be done and, we hope, into a position where we might be in the advance planning stage on those studies next year.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

Senator ABDNOR. Thank you. We appreciate your appearance here today. We have been here an hour and 45 minutes. We appreciate all your time and your testimony. We have other questions that we will submit in writing, and I think—yes, we are short members today for various reasons. So, some of those who are not present—Senator DeConcini I know will want to submit questions. With that understanding, we will leave the record open for that purpose. We thank you very, very much for your fine presentations. Thank you.

Mr. BROADBENT. Thank you very much, Senator, and we will respond quickly to your questions.

[The questions and answers follow:]

NEW PLANNING PROCESS

Question. Mr. Commissioner, could you tell the committee about the new planning process that is being implemented?

Answer. Analysis of past project investigations of the Bureau of Reclamation indicated that an average of 17 years has been required to complete planning activities prior to the start of project construction. A new planning process has been formulated to combine some of the reporting and review requirements of past investigations and to eliminate delays, or down time, between successive phases of the planning process. This new procedure, in addition to improving program management activities within Reclamation, has the potential for reducing the planning factor one-third to one-half of present-time requirements. This could amount to a substantial cost savings for those projects authorized under the new process.

Question. Why are you implementing this procedure prior to seeking legislative changes to the existing process?

Answer. The new planning process, as originally developed, provided for the elimination of the need to obtain feasibility study authority as required by Public Law No. 89-72. Although that requirement has not been eliminated, we are continuing to pursue that matter with the Congress and others. It has not been a deterrent to our implementing the new planning process.

Question. How do you determine when to issue a negative feasibility finding under the reconnaissance effort?

Answer. Under the new planning process, there is no specifically identified reconnaissance or feasibility-level stage. The first stage (project investigation) includes in succession: (1) the preparation of a plan of study, (2) a preliminary findings document, (3) a plan formulation working document, and (4) a planning report/draft environmental statement. During the preparation of the preliminary findings document, it is our intent to identify one viable alternative to justify continued study. The plan formulation working document identifies all reasonable alternatives and a selected plan. The report/environmental statement provides more detailed and specific information on the selected plan. If justification for the potential project disappears at any time during the investigation, the study is concluded.

Question. Why do you believe it will be easier under the new system to terminate studies which appear to lack feasibility when you have not had much success up to this point?

Answer. We feel that the format of the new planning process provides the means to terminate studies at an earlier stage in the process than was available under the previous process. For example, under the old process a 2- to 3-year appraisal (reconnaissance) investigation was completed before a determination was made to continue or conclude the study. Under the new process, that same determination can be made within the first year when the preliminary findings document is prepared.

CENTRAL SOUTH DAKOTA WATER DELIVERIES STUDY (CENDAK)

Question. Tell the committee what progress has been made on the central South Dakota water studies?

Answer. Extensive soil and drainage investigations were conducted by the Bureau last year. These data are now being compiled. The State of South Dakota also participated in drainage investigations as well as social assessment, archeological and historical studies, and fish and wildlife analysis work.

Question. Discuss briefly the current working relationship between the Bureau, State, and local interests to develop an acceptable project plan?

Answer. Local support is very high. A steering committee, with representatives from six counties, initiated an appraisal study in 1981 with funds received from interested landowners. The study has been included in the South Dakota State water plan by the South Dakota Legislature. The Department of Water and National Resources has ranked the study among the top five in priority. We are quite pleased with close working relationships that have developed between the interested parties. It will greatly increase our ability to expedite the completion of our study.

Question. Are State and local interests contributing to the project studies? What type of contribution is being made (money or in-kind services, et cetera)?

Answer. The State is doing the archeology studies, some engineering, and taking the lead in public involvement. Data will continue to be gathered and analyzed for the plan formulation document. This document will select the best plan and the extent of National Environmental Policy Act requirements. The plan formulation is being done jointly with the project sponsors, the State of South Dakota, and the Bureau. The final report will have input from all three entities and the public.

Question. Is the $450,000 request for 1984 sufficient to maintain the current study completion schedule and does the State support the schedule contemplated by the 1984 budget request?

Answer. Yes; the $450,000 is sufficient to maintain the current study completion schedule and we expect the project sponsors to seek construction authority as soon as firm figures are available. However, we have requested reprograming authority in the amount of $335,000. These funds, plus a contribution from the State of South Dakota, will allow us to accelerate land class, drainage, and part of the environmental work begun in fiscal years 1982 and 1983, as well as the draft planning report and EIS to completion by the end of fiscal year 1983 instead of fiscal year 1985, as originally planned.

Question. Now, the study has been reclassified as a project investigation. Is this a feasibility-level study on which project authorization could be based?

Answer. Under the two-step planning process, there will no longer be a feasibility level. The project investigation stage is to formulate a plan at less than the traditional feasibility grade level and recommend it for construction authorization.

WEB RURAL WATER DEVELOPMENT PROJECT, SOUTH DAKOTA

Question. I believe the Department supports the WEB pipeline project. Will the Bureau of Reclamation be able to expedite construction of this important project once additional funds are made available? Could you provide for the record a summary of any work that may be planned for the current year?

Finally, could you also provide an estimate of the direct employment that you expect will be created by project construction. Also, considering the multiplier effect, what level of indirect employment will be generated?

Answer. The Bureau of Reclamation is authorized to perform the functions and exercise the authority delegated by the Secretary of the Interior to provide loans and grants and otherwise assist in the planning and development of the WEB rural water development project in accordance with Public Law 96-355, as amended, and, therefore, is not directly involved in construction of the project. However, the WEB Water Development Association has indicated that they have the capability to expedite construction of the WEB rural water development project should additional funds be made available. The additional work which could be done with any funds in excess of the $1.9 million currently available would require a signed repayment contract. The signed repayment contract and proof of project financial feasibility are required before award of any construction contracts.

Work currently scheduled for fiscal year 1983 includes proceeding with final designs and other preconstruction activities. If additional funds become available, the following work could be accomplished: preliminary engineering, engineering design, and bidding activities on several project features and award of contracts for construction of the Lake Oahe intake, water treatment plant phase 1, and main transmission line No. 1.

Based on an estimated total cost of $91.4 million, the direct non-Federal employment generated by this project would be about 1,800 work-years and the indirect employment would be 3,200 work-years over the life of the project.

ADEQUACY OF THE OPERATIONS AND MAINTENANCE BUDGET REQUEST FOR FISCAL YEAR 1984

Question. The committee is interested in the adequacy of the operations and maintenance program budget request for fiscal year 1984. Although the proposed budget request provides a moderate increase in funding over the 1983 figures, I am concerned about the long-range impact that budget reductions may have on the ability of Bureau projects to meet their congressionally mandated obligations.

Would you describe the kinds of activities undertaken within the operation and maintenance program?

Answer. The Bureau of Reclamation generally operates and maintains only the reserved works—that is, the large dams, reservoirs, and powerplants which have not been turned over to water users. This is done with operation and maintenance appropriations or applied revenues received annually. Our facilities are scattered throughout the 17 Western States. We employ slightly over 2,000 people to operate and maintain these dams, reservoirs, canals, and powerplants. In addition, under the operation and maintenance program, we conduct our initial safety evaluation of existing dams; some soil and moisture conservation work; some cultural resource activities and land resources management work; and some very minimal recreation management works to provide for some 75 million recreation visits annually. We also provide water to Mexico from the Rio Grande and Colorado Rivers, using operation and maintenance funds.

Question. Are some of the activities essential to project operation or safety?

Answer. Yes; nearly all activities associated with our 32 projects are either essential to their operation or maintenance. Safety items are scattered throughout our budget and include such activities as the removal of polychlorinated-biphenyls (PCB's) from our powerplants, fire control equipment, and the repair of vehicles and equipment for safety purposes.

Question. Over the past few years, less money has been appropriated for operation and maintenance activities than had been requested. Could you describe the impact that these cuts have had?

Answer. Yes; they place us in the position of doing breakdown maintenance of facilities as opposed to the sounder preventative maintenance. Although our operation and maintenance program has been our highest funding priority, we have still suffered budget cuts in this appropriation of varying magnitudes. For example, our fiscal year 1983 budget was cut by nearly $21 million, or 15 percent, as a result of the continuing resolution. Many items and facilities scheduled for repair or replacement had to be delayed. Some equipment and vehicles must be run beyond their useful economic life. Our examination of existing structures program, under which we conduct our dam safety evaluation, will be set back drastically.

Question. In your opinion, does the Bureau need additional funds in order to assure the operation and performance of Bureau projects?

Answer. Yes. If we could receive the $21 million difference between our original fiscal year 1983 budget request and what has been received under the continuing resolution, it would be helpful. Essentially, we support our original fiscal year 1983 budget request.

Question. Do you need to catch up for neglect over the past few years?

Answer. Yes. However, we also should stay within the executive branch's budgetary guidelines. We believe we can catch up to some extent, plus stay within our budgetary constraints with adequate funding in fiscal year 1983 and fiscal year 1984.

Question. Could you provide for the record a detailed breakout of backlog in the operation and maintenance area by major activity, including a narrative description of the work and any adversity that could result.

Answer. Yes; a list of work is provided for the record.

Backlog of Operation and Maintenance Work

Project	Estimated Cost ($1,000)	Type of Work
Yuma Area	11,000	Dredge, reconstruct 34 miles of Colorado River Levee. Without adequate levee protection, areas south of Hoover Dam subject to severe flooding.
Central Valley	2,500	Replacements and additions to powerplants and irrigation facilities. Without these replacements, eventually water and power service could be seriously hampered.
Reclamation Reform Program	1,500	Implement and administer The Reclamation Reform Act of 1982. Without sufficient funds carrying out this Congressionally mandated program will be delayed or other O&M work will be delayed further to carry it out.
Upper Missouri Area	1,400	Install emergency cable bypass at Yellowtail Dam. If the existing underground cable should fail, some 2 years downtime would be experienced and $20 million in revenues lost.
Columbia Basin	1,500	Replace stator winding and transformer. Replacements insure reliability of the power system.
Rio Grande	1,300	Repair Elephant Butte dam and powerplant. Repairs are needed to protect the Dam and to maintain the integrity of the powerplant.
Boulder Canyon	1,200	Operational expenses; replace fire line to switchyard. Fire line needed for safety purposes.
Middle Rio Grande	1,000	Complete rehabilitation of low flow conveyance channel. Without the channel the Bureau will be unable to deliver to the state of Texas and to Mexico water to which they are entitled.
Examination of Existing Structures	1,000	Conduct analysis of existing dams. Without funding scheduled work will be delayed 1 year or more again.
North Platte Area	1,000	Construct Casper Control Center additions. Scheduled work will be delayed 1 year with increased costs.
Minidoka Area	900	Pave road and Blacktail Park parking area. Without funding work will be delayed 1 year or more.
Solano	800	Complete Lake Berryessa administrative complex. This work has been started twice and is partially complete. Work would be delayed 1 year.

Project	Estimated Cost ($1,000)	Type of Work
Various Projects	1,700	Replacement of road graders, a boom truck; replacement of spare transformer; replace circuit breakers and phase bus cables, conduct erosion control measures around various reservoirs. These items have been delayed 1 to 2 years. Eventually the vehicles and power equipment must be replaced or declared unsafe. Without erosion control, the reservoirs involved will silt up more quickly than projected.
Total	$26,800	

AVAILABILITY OF FUNDS FROM CONTINUING RESOLUTION

Question. It has come to our attention that the GAO has asked a number of agencies under the jurisdiction of this subcommittee for their views on the availability of funds provided by the continuing resolution. The issue is whether the funding provided by the continuing resolution shall remain available until expended or lapse on September 30, 1983. What are your views on this issue and what impact would limited, 1-year availability have on your programs and activities?

Answer. This problem has been resolved since the Treasury and GAO have provided us no-year warrants for the fiscal year 1983 appropriations.

ACTIVITIES CONTINGENT UPON AUTHORIZING LEGISLATION

Question. Could you provide for the record a list of all programs, projects, or activities in the 1984 budget, the use of which is contingent upon enactment of authorizing legislation?

Answer. Yes; the information is contained in the following table:

PROGRAMS CONTINGENT UPON ENACTMENT OF AUTHORIZING LEGISLATION—FISCAL YEAR 1984

Appropriation/project	Fiscal year— 1983 program	Fiscal year— 1984 program
GENERAL INVESTIGATIONS		
Project investigations:		
All-American Canal relocation, California		[1] $135,000
Blue Holes Reservoir, Wyoming		[1] 100,000
Central Valley project, New Melones conveyance system study and land classification, California		[1] 150,000
Prairie Bend unit, Nebraska	[1] $75,000	[1] 300,000
Advance planning:		
Palisades project, Palisades powerplant enlargement, Idaho	175,000	50,000
CONSTRUCTION PROGRAM		
San Luis Valley project, Closed Basin Division, wildlife facilities—Mitigation, Colorado [2]	[2] 348,000	[2] 869,000

[1] Public Law 89-72 requires the Secretary of the Interior to obtain congressional authority to conduct feasibility investigations. Under the new planning process, project investigations will be conducted in lieu of feasibility investigations and will be of lesser detail, thereby eliminating this requirement.

[2] Only this portion needs authorizing legislation.

PROJECTS IN LITIGATION

Question. Would you also supply for the record an update of all of your projects which have been initiated but are being delayed due to litigation? Include a brief narrative on the nature, status, and schedule of the litigation.

Answer. Five court actions have some current effect on our programs. On the Auburn-Folsom South unit in California, the judge ruled that the environmental impact statement for the project was adequate, but he retained jurisdiction over the case pending completion of studies of the lower American River. A final environmental impact statement is scheduled on the lower American River studies in February 1984.

On the O'Neill unit in Nebraska, the project has been under an injunction pending completion of a second final supplemental environmental impact statement. The supplemental statement has been completed and filed with the court but pretrial motions are under consideration by the judge and an evidentiary hearing is not expected before fall.

The Bureau of Indian Affairs Navajo Indian irrigation project was the subject of a suit on the adequacy of the environmental impact statement for the project. One result of the suit was an injunction against construction of a powerplant at Navajo Dam. Reclamation was to construct the powerplant for the Bureau of Indian Affairs. The Bureau of Indian Affairs is currently considering other alternatives for providing power to the project.

Reclamation is under two separate court orders to prepare regulations to administer the acreage limitation provisions of reclamation law and to prepare an environmental impact statement on the rulemaking. The draft environmental statement and proposed rules were published in January 1981. Following the recent passage of the Reclamation Reform Act of 1982, the final environmental statement and revised rules are being completed.

The Central Arizona Project Indian water allocation was the subject of an injunction in December 1980 due to a lack of an environmental impact statement. The injunction directed the Secretary not to enter into contracts, rendered the previously signed contracts unenforceable, and prohibited their implementation. The injunction remains in force pending a decision by the court on the final environmental statement filed in March 1982.

NEW CONTRACT AWARDS FOR 1984

Question. Please provide for the record a list of the new contracts the Bureau plans to award in the last half of fiscal year 1983, including a brief description of the work, funding requirement, the estimated award date, and other data similar to that provided last year. The committee would also like similar information for the new contract awards scheduled for fiscal year 1984

Answer. Yes; we can provide information on new contract awards for fiscal years 1983 and 1984.

[The information follows:]

FISCAL YEAR 1983 NEW CONSTRUCTION CONTRACT AWARDS

3rd & 4th QUARTER FISCAL YEAR 1983
(Dollars in Thousands)

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1983 AMOUNT
Brantley Project	Relocate US Highway No. 285	8/83	4,848	225
	Construct Warehouse/Shop Buildings	8/83	379	244
Columbia Basin, Irrigation Facilities	Priest Rapids Wasteways	6/83	1,500	300
Columbia Basin, Third Powerplant	Fabricate Jumbo For Penstock	4/83	450	300
	Completion Work all Areas	4/83	6,900	100
Central Valley Project, Miscellaneous Project Programs	Check Gate Motors	4/83	210	210
	Remote Control Equipment	6/83	1,300	890
Central Valley Project, Sacramento River Division	Reach 7 transfer	7/83	109	55
	Reach 8A transfer	7/83	132	66
Central Valley Project, San Luis Unit	Programmable Monitoring System	6/83	400	400
	Modify Regulating Tank	6/83	100	100
Fryingpan-Arkansas Project	Modify Twin Lakes Dam	4/83	2,911	1,710
	Corrective Work Mt. Elbert Conduit	5/83	43	43
	Electrical Install/Testing Completion	5/83	1,100	445
McGee Creek Project	Relocate cemeteries	4/83	50	50
	Access Road/Fish and Wildlife Mitigation	9/83	10	10

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1983 AMOUNT
Nueces River Project	South Shore Area Facilities	6/83	3,788	3,000
	Stone Residence - Remodeling	6/83	70	35
	Monitoring Equipment	7/83	100	50
Pick-Sloan Missouri Basin Project, North Loup Division	Calamus Dam Stage 03	8/83	3,900	140
	Mirdan Pipe Laterals	9/83	5,500	10
Pick-Sloan Missouri Basin Project, Riverton Unit	Lateral piping and canal lining work	6/83	3,908	190
Shoshone, Frannie Division	Rehabilitation of laterals	6/83	1,425	166
Strawberry Valley Project	Repair Springville Mapleton Siphon	6/83	190	190
Yakima Outlook Irrigation District	Rehabilitate District Facilities	5/83	2,891	160
Washita, Foss Dam	Pressure Relief Weels - Phase I	4/83	570	370
Washoe Project	Stampede Powerplant and Switchyard	4/83	3,847	1,000
Milk River, Sherburne Dam	Raise Access Bridge	6/83	250	250
North Platte, Guernsey Dam	Modification North Spillway	7/83	1,500	45
Colorado River Basin Salinity Control Project, Title I Division	Mittry Lake Development	8/83	1,500	500

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1983 AMOUNT
Colorado River Basin Salinity Control Project, Las Vegas Wash Unit	Pittman Bypass Pipeline	8/83	418	418
Colorado River Basin Salinity Control Project, Paradox Valley Unit	Deep Well Irrigation	9/83	8,600	1,500
Central Utah Project, Bonneville Unit	Currant Creek Road Gravel	5/83	500	357
	Jordan Aqueduct Section 4, Alphine Section 3	7/83	41,996	8,000
	Expand Temporary Camp Annex B	6/83	100	100
Central Utah Project, Jensen Unit	Bulkhead Gate	4/83	28	28
Dolores Project	Great Cut Pumping Plant	5/83	13,450	1,100
	Ormiston Point Road	6/83	1,660	600
	Reservoir Fence	6/83	49	49
	Stock Driveway	6/83	48	48
	Reservoir Clearing	4/83	622	422
	Addition to Construction Headquarters	4/83	150	150
	Addition to Dolores Field Station	4/83	83	80
	House Creek Boat Ramp	6/83	600	550
	Upgrade Existing Terminals	6/83	44	22
Central Arizona Project	Check Completions Granite Reef - Reach 1-5	4/83	2,200	250
	Power Control Cable, Reach 1-12	7/83	8,100	50
	Salt River Siphon Scour Control	9/83	700	10
	Aggregate Reach 1B	9/83	250	10
	Warehouse/Shop	7/83	100	10

FISCAL YEAR 1984 NEW CONSTRUCTION CONTRACT AWARDS

WITH TOTAL COSTS IN EXCESS OF $1,000,000
(Dollars in Thousands)

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Brantley Project	Relocate Railroad	9/84	13,959	200
Chief Joseph, Oroville - Tonasket Unit	Construct Osoyoos Pumping Plant	3/84	2,390	390
	Construct Osoyoos Distribution System	3/84	13,265	3,200
Columbia Basin, Irrigation Facilities	West Canal Enlargement Phase I	10/83	2,500	1,300
Columbia Basin, Third Powerplant	Slope Stabilization, Area 3, 4	4/84	5,000	1,500
	Dewatering Wells, Area 6, 7	1/84	1,260	1,260
	Replace Four Circuit Breakers	10/83	1,800	600
Central Valley Project, Sacramento River Division	Tehama Colusa County Headworks Enlargement	10/83	1,582	1,582
	Install 3 Corning Pumping Plant Units	10/83	1,009	1,009
	Fish Screen - Settling Basin	12/83	1,293	1,293
Central Valley Project, San Felipe Division	Santa Clara Conduit 2	12/83	36,500	14,131
	Hollister Conduit 2	5/84	14,600	3,819
	Pacheco Conduit - Section 1	10/83	18,000	12,099
	Pacheco Conduit - Section 2	5/84	14,400	2,436
	Coyote Pump Plant	6/84	4,300	523
	San Justo Dam and Reservoir	8/84	22,000	1,186

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Central Valley Project, San Luis Unit	Raise Canal Structures	12/83	4,500	4,000
McGee Creek Project	Access Roads - Scenic, Recreation, Wildlife	10/83	1,890	1,500
Nueces River Project	Calliham Area Facilities	10/83	7,035	5,384
Pick-Sloan Missouri Basin Project, Garrison Diversion Unit	Relocation Sheridan County Roads	8/84	1,810	25
	Relocation Wells County Roads	8/84	1,160	25
	Oakes Test Area - Distribution System	5/84	9,640	1,000
	Lonetree Dam and Dikes	11/83	13,950	4,000
	Reach 1A - New Rockford Canal	4/84	8,480	1,000
Pick-Sloan Missouri Basin Project, North Loup Division	Mirdan Canal, Section 2/3	11/83	17,410	5,210
	Recreation Contracts	10/83	1,030	190
Pick-Sloan Missouri Basin Project, O'Neill Unit	Access County Road to Damsite	7/84	2,590	200
San Luis Valley, Closed Basin Division	Canal Stage 1/2, Reach A	10/83	4,702	1,948
	Canal Stage 1/2, Reach B	6/84	2,555	800
	Transmission Line - Substation Stage 03	9/84	1,655	100
	Laterals Stage 1-2, System A	10/83	3,547	2,641
	Transmission Line - Substation Stage 1/2	10/83	2,012	1,700

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Harlingen Irrigation District	Rehabilitate Laterals and Drains	12/83	2,349	300
Milk River, Glasgow Division	Rehabilitate Canal, Laterals, Drains	1/84	2,070	90
Okanogan Irrigation District	Replace Lateral Distribution System	10/83	11,529	4,120
Pick-Sloan Missouri Basin Project, Helena Valley Unit	Rehabilitate Canal and Laterals	10/83	1,936	264
Salt River, Roosevelt Water Conservation District	Rehabilitate canals	10/83	7,474	1,200
Strawberry Valley Project	Replace Spanish Fork Diversion Dam	9/84	2,327	423
Sun River, Fort Shaw Division	Rehabilitate Canal and Laterals	10/83	1,620	80
Tucumcari Project	Rehabilitation of Canals	11/83	2,125	75
Yakima, Grandview Irrigation District	Replace Main Pump Discharge Line	3/84	1,215	261
Yakima, Granger Irrigation District	Replace 3 miles Lateral Distribution	1/84	1,287	127
Yakima, Sunnyside Board of Control	Rehabilitate Joint Facilities	2/84	15,683	175
Yakima, Sunnyside Valley Irrigation Irrigation District	Rehabilitate Sunnyside Distribution	3/84	15,764	225

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Eden Project	Big Sandy Spillway Modification	6/84	2,369	200
Klamath Project	East Drain Distribution	10/83	2,730	1,144
	East Unit/Subsurface Drains	10/83	1,000	799
Pick-Sloan Missouri Basin Project, Farwell Unit	Canal Lining and Pipe	6/84	1,610	275
San Angelo, Twin Buttes Dam	Pipe Collector Drain System	6/84	2,000	325
Washita, Foss Dam	Toe Drains	6/84	1,000	300
Orland, Stony Gorge Dam	Modify Spillway and Outlet	1/84	4,470	3,870
Colorado River Basin Salinity Control Project, Las Vegas Wash Unit	Construct Bypass Channel	10/83	4,416	108
Central Utah Project, Bonneville Unit	Soldier Creek Remedial Work	10/83	4,305	2,870
	Upper Stillwater Dam	10/83	81,600	23,322
	North Fork Siphon	8/84	10,878	927
	Relocate Highway 40 - 189	7/84	68,608	3,966
	Exploratory Shaft Fifth Water	6/84	6,500	2,167
	Sheep Creek / Rays Valley Road	10/83	10,000	5,100
	Taylor Canal Area Drains	11/83	1,227	562

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Central Utah Project, Jensen Unit	Tyzack Aqueduct Reach 2	4/84	1,974	1,206
Dolores Project	Landfill and Protection Dike	4/84	1,590	1,193
	Dove Creek Canal - Reach 1	12/83	13,490	5,000
	Lone Dome - Williams Draw Road	10/83	1,930	1,294
	Dolores - Norwood - May Canyon Roads	10/83	2,980	2,140
Seedskadee Project	Grout Fontenelle Dam	4/84	1,100	367
Central Arizona Project	Granite Reef Turnouts	11/83	5,000	3,735
	Warehouse/Heavy Equipment Shop	2/84	7,300	6,000
	Salt Gila Power Cables	3/84	1,970	700
	Salt Gila Turnouts	7/84	1,121	200
	Salt Gila Reach 1B	10/83	19,000	11,368
	Spook Hill Substation	10/83	3,050	2,932
	Salt Gila Check Completions	11/83	4,063	2,700
	Tuscon Reach 1 Station 110-340	3/84	8,000	6,603
	Ak Chin Link Pipeline	10/83	1,000	1,000
	Non-Indian Distribution Systems Nos. 1, 2, 3	10/83	39,100	8,977

STATUS OF SURVEY REPORTS

Question. The committee would like you to provide, for the record, a complete status report in chart and summary form of the various stages of review of all project reports beginning with the regional director's notice date through the date the report is submitted to Congress.

Answer. We are pleased to provide you with a copy of our planning instruction No. 82-10, dated May 22, 1982, which implemented the new two-stage planning process. This instruction provides a description of the various steps, including the reviews that occur, throughout the process. Several charts also are provided as you requested.

The notice of intent that you refer to is not mentioned in the planning instruction or shown on the charts. However, a notice of intent would be prepared shortly after funds are made available to initiate the preliminary findings study.

[The information follows:]

CURRENT STATUS OF RECLAMATION PROJECT REPORTS[1]

Name of project and location	Investigations under two-stage planning process									
	Appraisal special report	Plan of study	Plan formulation		R&D's planning rept./EIS[4]	Process planning rept./EIS	OMB clearance	Construction authorization	Preconstruction report	Initiate construction
			PRF[2]	PFWD[3]						
All-American Canal relocation (project invest.), California		X								
Blue Holes Reservoir (project invest.), Wyoming		X								
Boise project, power and modification study (project invest.) Idaho										
Buffalo Bill Dam modification, Shoshone project (advance planning), Wyoming			X				XX	XX	XX	
Central California-Nevada wind energy study (special invest.), California and Nevada	X									
CENDAK (central South Dakota water studies) (project invest.) South Dakota		X	X							
Central Valley fish and wildlife management study (special invest.), California	X									
Central Valley project, California:										
Kellogg unit reformulation (project invest.)		X	X							
San Joaquin drainage investigation (project invest.)			X							
Shasta division enlarged Shasta Lake investigation (project invest.)		X	X							
Stanislaus division New Melones conveyance system (project invest.)		X		X						
CRSP:										
Dolores unit (project invest.), Colorado										
Generation at outlet—Crystal Dam (project invest.), Colorado			X							
Generation at outlet—Flaming Gorge (project invest.), Utah			X							
Power peaking capacity studies (project invest.), Wyoming and Arizona		X								

CURRENT STATUS OF RECLAMATION PROJECT REPORTS[1]—Continued

Name of project and location	Investigations under two-stage planning process: Appraisal special report	Plan of study	Plan formulation: PRF[2]	Plan formulation: PFWD[3]	R&D's planning rept./EIS[4]	Process planning rept./EIS	OMB clearance	Construction authorization	Preconstruction report	Initiate construction
CRWQIP:										
Big Sandy River unit (project invest.), Wyoming			X							
Dirty Devil River unit (project invest.), Utah			X							
Glenwood-Dotsero Springs unit (project invest.), Colorado			X							
LaVerkin Springs unit (project invest.), Utah			X							
Lower Gunnison basin unit (project invest.), Colorado		XX		XX	X					
Lower Gunnison basin unit II (project invest.), Colorado										
Lower Virgin River unit (project invest.), Nevada and Arizona										
McElmo Creek unit (project invest.), Colorado			X							
Meeker Dome unit (project invest.), Colorado			X							
Price-San Rafael Rivers unit (project invest.), Utah			X							
Saline water use and disposal opportunities unit—Saline water cooling tower verification program (project invest.), Nevada, New Mexico, Utah, and Wyoming										
Saline water use and disposal opportunities unit—Aquatrain (project invest.) Nevada, New Mexico, and Utah	X									
Uinta basin unit (project invest.), Utah		X								
Uinta basin unit II (project invest.), Utah										

Crow Creek Indian Reservation area (project invest.), South Dakota		X	X						
Deep-Carbonate aquifer investigation (special invest.), Nevada	X								
Delta support studies (special invest.), California	X								
Farmers Irrigation District (special invest), Oregon	X								
Garrison diversion unit, M&I water facilities (project invest.), North Dakota			X						
Geothermal resource investigations (special invest.)	X								
Guernsey Dam powerplant enlargement (project invest.), Wyoming			X						
Hungry Horse powerplant enlargement and reregulating reservoir (project invest.), Montana			X						
Hydropower at existing facilities (special investigation)	X								
Idaho anadromous fish habitat restoration (appraisal invest.), Idaho	X								
Klamath project, Upper Klamath offstream storage study (appraisal invest.), Oregon	X								
Lake Andes-Wagner unit, South Dakota:									
Project investigation				X					
Advance planning									
Lake Meredith salinity control project (project invest.), New Mexico and Texas									
Lower Colorado River water conservation and efficient use program (special invest.), Nevada	X	X	X						
Lower Colorado water supply study (project invest.), Colorado		XX	X						
Lower Gunnison basin unit (CRWQIP), (advance planning), Colorado									
Marias-Milk project (advance planning, Montana		X							
Minidoka project, North Side pumping division extension (project invest.), Idaho		X	X						

CURRENT STATUS OF RECLAMATION PROJECT REPORTS[1]—Continued

Name of project and location	Investigations under two-stage planning process: Appraisal special report	Plan of study	Plan formulation: PRF[2]	Plan formulation: PFWD[3]	R&D's planning rept./EIS[4]	Process planning rept./EIS	OMB clearance	Construction authorization	Preconstruction report	Initiate construction
North Platte River hydroelectric study (project invest.), Wyoming			X							
Nueces River basin study (special invest.), Texas	X									
Offstream storage, Yellowstone River (appraisal invest.), Montana	X									
Palisades project, Palisades powerplant enlargement (advance planning), Wyoming		X								
Platte River water use options (special invest.), Nebraska	X									
Prairie Bend unit (project invest.), Nebraska		X	X							
Rapid City regional water supply (project invest.), South Dakota		X	X							
Republican River basin water management study (special invest.), Kansas and Colorado	X									
Rogue River basin, Oregon:										
Grants Pass division (project invest.)			X							
Medford division (project invest.)			X							
Santa Margarita project (project invest), California					X	XX	X			
Solomon River basin water management study (special invest.), Kansas	X									
South Dakota water deliveries study (project invest.), South Dakota			X							
Texas basins project, Texas:										
Bedias project (project invest.)		X								
Bon Wier project (project invest.)			X							
Columbus Bend M&I water supply study (project invest.)		X	X							
San Jacinto project (project invest.)		X								

Texas basins project, Texas—Continued										
Texas Big Sandy project (project invest.)			X							
Tiber powerplant (project invest.), Montana				X						
Tularosa basin project (appraisal invest.), New Mexico		X								
Umatilla basin project (project invest), Oregon				X						
Upper John Day project (project invest.), Oregon				X						
Wasatch Front total water management (special invest.), Utah		X								
Water conservation opportunities, Imperial Irrigation District (special invest.), California		X								
Wind-hydroelectric energy project (project invest.), Wyoming				X						
Yakima project, Cle Elum and Tieton powerplants (project invest.), Washington			X	X						
Yakima River basin water enhancement project (project invest.), Washington			X	X						

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[1] As shown in the fiscal year 1984 general investigations program. Only those project investigations initiated after fiscal year 1982 will be subject to the new planning process from the beginning of the process; all other investigations are being adapted to the new process at the appropriate place in the process.

[2] Preliminary findings report (PFR).

[3] Plan formulation working document (PFWD).

[4] Environmental impact statement (EIS).

NOTE: X, underway; XX, completed.

FISCAL YEAR 1984 CAPABILITIES

Question. Provide for the record a list showing the Bureau's fiscal year 1984 funding capability for all studies and planning and construction projects.

Answer. We will be pleased to provide for the record a list of projects on which additional capability exists for consideration during your evaluation of the President's budget. However, in view of the current budgetary constraints, we would not recommend that additional funds be added to the President's requested budget. While work on individual projects and/or activities could be initiated and/or accelerated, full accomplishment of all of the work on the list in fiscal year 1984 would not be possible. The President's budget request does represent the preference of work for fiscal year 1984 and an efficient workload for the Bureau. The prepared list is provided for the record.

[The information follows:]

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Fiscal Year 1984 Proposed Capabilities
by Appropriation and Project

Appropriation/Project	Fiscal Year 1984 Request			Additional Capabilities Submitted			Total Capability			Location by State and Congressional District/ Senatorial Support
	Federal	Non-Federal	Total	Federal	Non-Federal	Total	Federal	Non-Federal	Total	
				(In thousands of dollars)						
GENERAL INVESTIGATIONS										
Plan Formulation Investigations:										
Project Investigations:										
Central Valley Project:										
Enlarged Shasta Lake Investigation	---	---	---	900	1,500	2,400	900	1,500	2,400	California - 2,3,4,7,14,18.
San Joaquin Valley Ground Water/ Surface Water Integration Study	---	---	---	300	---	300	300	---	300	California - 12,14,15,17,18,20.
Colorado River Water Quality Improvement Program, Saline Water Use and Disposal Opportunities Unit (Aquatrain)	700	1/	700	1,900	1/	1,900	2,600	1/	2,600	Arizona - 3. California - 37,45. Colorado - 3, 6. Nevada - 1. New Mexico - 3. Utah - 1,2,3. Wyoming - At Large
General Engineering and Research:										
Atmospheric Water Resources Management Program	4,715	---	4,715	2,750	---	2,750	7,465	---	7,465	Arizona - 3,4. California - 21,22,23,24,25, 26,27,28,29,30,31,32,33,34,35,36,37, 39,40,41,42,43. Colorado - 2,3,4,6. Montana - 1,2. Nevada - 1. New Mexico - 1,2. North Dakota - At Large. Oklahoma - 1,5. South Dakota - 1,2. Texas - 6,10,11,17. Utah - 2. Wyoming - At Large.
Program Related Engineering and Scientific Studies (PRESS)	4,765	---	4,765	780	---	780	5,545	---	5,545	Colorado - 2. Also, Senators Hart and Armstrong
Advance Planning:										
Santa Margarita Project	---	---	---	500	---	500	500	---	500	California - 43. Also, Senators Cranston and Wilson

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1/ Non-Federal participation in this project is separate from Bureau involvement and is not contained in the Bureau's budget document and do not affect totals for the Federal portion of project cos
They have, therefore, not been included in the above line item. The non-Federal participant, a private firm, estimates an FY 1984 budget of $3,700,000, with additional capability of $3,100,000.

BUREAU OF RECLAMATION

Fiscal Year 1984 Proposed Capabilities
by Appropriation and Project

Appropriation/Project	Fiscal Year 1984 Request			Additional Capabilities Submitted			Total Capability			Location by State and Congressional District/ Senatorial Support
	Federal	Non-Federal	Total	Federal	Non-Federal	Total	Federal	Non-Federal	Total	
				(In thousands of dollars)						
CONSTRUCTION PROGRAM										
Construction and Rehabilitation:										
Regular Construction:										
* Boulder Canyon Project, Hoover Dam Powerplant Uprating, Facility Improvements, and Hoover Dam Bridge	---	---	---	1,500	---	1,500	1,500	---	1,500	Arizona - 3. Also, Senators Goldwater, Sr., and DeConcini. Nevada - 1. Also, Senators Laxalt and Hecht.
Central Arizona Project, Non-Indian Distribution Systems	10,000	10,600 2/	20,600	24,000	---	24,000	34,000	10,600 2/	44,600	Arizona - 1,2,3,4,5. Also, Senators Goldwater Sr., and DeConcini
Central Valley Project, San Luis Unit, San Luis Drain	---	---	---	1,000	---	1,000	1,000	---	1,000	California
Headgate Rock Hydroelectric Project	11,000	---	11,000	7,000	---	7,000	18,000	---	18,000	Arizona - 3. Also, Senators Goldwater, Sr., and DeConcini
Palisades Project	---	---	---	500	---	500	500	---	500	Idaho - 2.
Pick-Sloan Missouri Basin Program:										
Buffalo Bill Dam Modification	3,000	2,400	5,400	1,035	815	1,850	4,035	3,215	7,250	Wyoming - At Large.
Narrows Unit	---	---	---	500	50	550	500	50	550	Colorado - 4.
Santa Margarita Project	---	---	---	2,500	---	2,500	2,500	---	2,500	California - 43. Also, Senators Cranston and Wilson.
Drainage and Minor Construction:										
Gila Project, Yuma Mesa Division	---	---	---	475	---	475	475	---	475	Arizona - 2 3. Also, Senators Goldwater, Sr., and DeConcini.
Rehabilitation and Betterment:										
Yakima Project, Yakima-Tieton Irrigation District	22,200	---	22,200	8,000	---	8,000	30,200	---	30,200	Washington - 4.
Colorado River Storage Project:										
* Animas La Plata Project	---	---	---	1,350	150	1,500	1,350	150	1,500	Colorado - 3. New Mexico - 3.
Recreational and Fish and Wildlife Facilities	7,616	---	7,616	13,400	---	13,400	21,016	---	21,016	Colorado - 3. Utah - 3. Wyoming - At Large
Colorado River Basin Project:										
Central Arizona Project	155,600	---	155,600	17,200	---	17,200	172,800	---	172,800	Arizona - 1,2,3,4,5. Also, Senators Goldwater, Sr., and DeConcini.
Work for Other Agencies:										
WEB Rural Water Development Project	---	---	---	13,000	167	13,167	13,000	167	13,167	South Dakota - At Large

* Potential new start in fiscal year 1984.

2/ Non-Federal contributions do not appear in the Bureau's budget documents; however, the districts estimate this to be the value of their contributions, which is a combination of up-front financing, in-kind services, and materials.

BUREAU OF RECLAMATION

Fiscal Year 1984 Proposed Capabilities
by Appropriation and Project

Appropriation/Project	Fiscal Year 1984 Request			Additional Capabilities Submitted			Total Capability			Location by State and Congressional District/ Senatorial Support
	Federal	Non-Federal	Total	Federal	Non-Federal	Total	Federal	Non-Federal	Total	
				(In thousands of dollars)						
OPERATION AND MAINTANANCE										
Central Valley Project	34,088	---	34,088	1,000	---	1,000	35,088	---	35,088	Various Congressional Districts.
Reclamation Reform Program	600	---	600	1,400	---	1,400	2,000	---	2,000	
Yuma Area Projects	11,759	---	11,759	5,500	---	5,500	17,259	---	17,259	Arizona - 2, 3. California - 35,45. Nevada - 1.
LOAN PROGRAM										
AK-Chin Indian Community (East)	---	---	---	4,000	---	4,000	4,000	---	4,000	Arizona - 4. Also, Senators Goldwater, Sr., and DeConcini.
Galesville Project	---	---	---	4,000	4,000	8,000	4,000	4,000	8,000	Oregon - 4.
Hidalgo County Irrigation District, No. 1	---	---	---	500	350	850	500	350	850	Texas - 15.
Oakdale Irrigation District	---	---	---	3,094	---	3,094	3,094	---	3,094	California - 12, 18.
Rainbow Municipal Water District	---	---	---	3,739	---	3,739	3,739	---	3,739	California - 43. Also, Senators Cranston and Wilson
Santa Ana Watershed Project	---	---	---	2,000	---	2,000	2,000	---	2,000	California - 33, 35, 36, 37, 38, 39, 40, 42. Also, Senators Cranston and Wilson.
GENERAL ADMINISTRATIVE EXPENSES										
Stage One Computer	---	---	---	4,500	---	4,500	4,500	---	4,500	

STUDIES AND PROJECTS NOT CONTINUED

Question. Provide for the record a listing of all studies, projects, programs, or activities funded in 1983 for which no funds are requested in 1984 and the reason why continuation funding is not requested.

Answer. Yes; we can provide you with information on those activities not continuing into 1984.

[The information follows:]

Ongoing programs with no fiscal year 1984 budget request

Appropriation projects/programs	*Reason*
GENERAL INVESTIGATION	
Plan formulation and appraisal investigations:	
Idaho anadromous fish habitat restoration, Idaho.	Studies to be completed.
Klamath project, upper Klamath offstream storage study, Oregon.	Do.
Offstream storage, Yellowstone River, Montana.	Do.
Tularosa basin water and energy study, New Mexico.	Do.
Project investigations:	
Central Valley project, San Joaquin drainage investigation, California.	Do.
Central Valley project, enlarged Shasta Lake investigation, California.	Concluded; project not currently needed.
CRSP power peaking capacity studies	Concluded; objectives met.
Garrison division unit M&I water facilities, North Dakota.	Investigation rescoped to complete in fiscal year 1983.
Lake Andes-Wagner water diversion proposal, South Dakota.	Studies to be completed.
Rogue River basin project, Medford division, Oregon.	Concluded due to lack of economic justification.
Santa Cruz Dam and Reservoir study, New Mexico.	Studies to be completed.
Tiber powerplant, Montana	Concluded; non-Federal interests continuing investigation.
Projects:	
Animas-La Platta	Preconstruction activities complete in 1983.
Pick-Sloan Missouri basin program, Narrows unit	Preconstruction activities complete in 1983. Increased ceiling legislation is needed along with a new start recommendation.
Teton, lower Teton	All minor work completes in 1983. No construction is scheduled in 1984.
Pick-Sloan Missouri basin program, Lower. Marias unit.	Project is completing construction in 1983.
Lower Rio Grande, Mercedes division	Rehabilitation of district pumping plant completes in 1983.
Pick-Sloan Missouri basin program, Bostwick division.	Construction completes in 1983 on floodway channels, drains, laterals.
Pick-Sloan Missouri basin program, Canyon Ferry unit.	All minor contracts complete project works in 1983.
Pick-Sloan Missouri basin program, Dickinson unit.	Do.
Pick-Sloan Missouri basin program, Helena Valley unit.	Do.
Leadville mine drainage tunnel	Activity on project limited to monitor-

	ing tunnel discharge for water quality per agreement with EPA.
Ventura River, Lake Casitas	Completion of all work scheduled for 1983.
San Juan-Chama participating project	All minor contracts complete project works in 1983.
Central Utah project, Vernal unit	All drainage, minor construction contracts will complete in 1983 on Vernal area drainage system.
Milk River, Sherburne Dam	Safety work on modification of Lake Sherburne Dam will complete in 1983.
Special:	
Central California-Nevada wind energy study, California-Nevada.	Studies to be completed.
Delta support studies, California	Do.
Geothermal resources investigations	Do.
Hydropower at existing facilities	Studies discontinued because of non-Federal interest to develop powerplants at existing Bureau projects.
Nueces River basin study, Texas	Studies to be completed.
Solomon River basin water management study, Kansas.	Do.
Water conservation opportunities, Imperial Irrigation District, California.	Do.
Advance planning:	
Buffalo Bill Dam modification, Shoshone project, Wyoming.	Do.

NEW GENERAL INVESTIGATIONS

Question. Also provide for the record a tabulation similar to that provided last year of all new studies and planning projects proposed in the 1984 budget.

Answer. There are seven new project investigations in the fiscal year 1984 budget and three new advance planning investigations. I will provide a list for the record.

[The information follows:]

FISCAL YEAR 1984 NEW STARTS—PLAN FORMULATION

	Fiscal year 1984	Total estimated cost	Duration (years
PROJECT INVESTIGATION			
California: All-American Canal relocation—Water quality	$135,000	$550,000	2
Texas: Bedias project—Municipal and industrial	150,000	675,000	4
Wyoming: Blue Holes Reservoir—Multipurpose	100,000	670,000	3
California: Central Valley project, New Melones conveyance system study—Irrigation	150,000	1,300,000	5
Nevada-Arizona: Colorado River water quality improvement program, lower Virgin River unit	60,000	550,000	4
Texas: San Jacinto project—Municipal and industrial	150,000	800,000	4
Texas: Texas Big Sandy project—Municipal and industrial	150,000	830,000	4
ADVANCE PLANNING			
South Dakota: Lake Andes-Wagner water diversion proposal—Irrigation	150,000	525,000	2
Colorado: Lower Gunnison basin unit, CRWQIP—Water quality	530,000	1,250,000	3
Montana: Marias-Milk project—Irrigation	150,000	700,000	4

WIND-HYDROELECTRIC ENERGY PROJECT, WYOMING

Question. Mr. Commissioner, about a year ago, the committee allowed you to proceed with completion of a second system verification unit at Medicine Bow, Wyo., provided Federal involvement would be ended within 2 years and that the Federal investment be recovered to the extent practical. What action has the Bureau taken to carry out the committee direction?

Answer. The second system verification unit at Medicine Bow was accepted from the contractor in September 1982 and produced 490,000 kWh of energy valued at $7,000 before it was temporarily shut down pending investigation of a design deficiency in the propeller shaft of similar Boeing machines elsewhere.

Contacts to date with non-Federal interests have not resulted in any serious offers to purchase the unit. We will continue that effort with the goal to have the machine disposed of as directed.

Question. Review, briefly, how work is proceeding on obtaining operational data. When is the 2-year operation and maintenance program scheduled to be completed?

Answer. A memorandum of agreement between Electric Power Research Institute, Reclamation, and Hamilton Standard has been drafted to accumulate data. Operational data accumulated will include measurements of energy production and machine availability in relationship to wind conditions. Operations and maintenance costs will be accumulated and significant problem areas will be identified.

At this time, meteorological data are being recorded from a meteorological tower at the site. Energy output and hours of operation are being recorded through the existing project operations and maintenance management system. The 2-year operation and maintenance program is scheduled to be completed in September 1984.

Question. In light of the "no-significant-impact" finding under the wind hydroelectric energy integration study, why is it necessary to undertake the extensive environmental resource monitoring program?

Answer. The acceptance of the no-significant-impact findings was largely due to Reclamation's commitment stated in the environmental assessment report for an ongoing monitoring program which would verify the many environmental assumptions made during the planning stage.

The monitoring program has continued for 2 years and termination of this program before evaluating the impacts of operating the wind turbines would negate all the work already done and not fulfill our commitment stated in the environmental assessment report.

RESEARCH AND DEVELOPMENT

Question. What does the Bureau do in the area of research and development to support the accomplishment of your water resources mission?

Answer. The Bureau conducts the program-related engineering and scientific studies effort to directly support accomplishment of our mission. This program is an applied, problem-solving research and development effort covering all areas of the Bureau mission. The research is directed toward solving the problems and needs of Bureau planners, designers, and project operators. This program has realized benefit-cost ratios of about 10:1 in recent years.

The atmospheric water resources management program is conducted to develop a precipitation enhancement technology for augmenting the Nation's fresh water supplies, especially in the semiarid Western United States where critical water shortages are imminent.

Question. How much have you spent each year for the past 5 years on research and development activities? How much is requested for 1984? Provide for the record a detailed breakout of the 1982 and 1983 allocation by major research area along with the 1984 request.

Answer. Funding in the amount of $9,480,000—$4,765,000 for program-related engineering and scientific studies and $4,715,000 for atmospheric water resources management—is requested for fiscal year 1984. Submitted for the record are two tables, one showing the expenditures for the program for fiscal year 1979 through fiscal year 1982 and the second showing a breakout of the 1982 and 1983 allocation by major research area, along with the 1984 request.

The research funding data shown in the second table does not include activities recently transferred to Reclamation from the Office of Water Research and Technology which was abolished August 25, 1982. The fiscal year 1983 Interior and Related Agencies Appropriations Act appropriated $6 million to be transferred to the Bureau, of which $5 million will be used to continue water-related research projects and $1 million will be used to administer the projects transferred from the Office of Water Research and Technology. In addition, there were $1,652,397 in fiscal year 1982 carryover funds and $25,602 of no-year funds from the former Office of Water Research and Technology, making a total of $7,677,999 available for fiscal year 1983. Also, $470,000 has been requested for fiscal year 1984 to administer and close out the remaining projects transferred to the Bureau. National water research will be conducted in the broad categories of water reuse, ground water management, brackish water utilization, water conservation and use efficiency, and saline water conversion.

RESEARCH AND DEVELOPMENT EXPENDITURES FOR FISCAL YEARS 1979–82 WITH ESTIMATE FOR FISCAL YEAR 1983

	Fiscal year—				
	1979	1980	1981	1982	1983
Program-related engineering and scientific studies	$2,789,000	$2,965,000	$4,578,000	$3,526,000	$4,189,000
Equipment			800,000	545,000	700,000
Atmospheric water resources management	9,371,000	8,486,000	5,697,000	4,997,000	4,293,000
Total	12,160,000	11,451,000	11,075,000	9,068,000	9,182,000

RESEARCH AND DEVELOPMENT—BREAKOUT OF FISCAL YEARS 1982–84 ALLOCATIONS

	Fiscal year—		
Major research areas	1982	1983	1984
Atmospheric water resources management	$4,997,000	$4,293,000	$4,715,000
Program-related engineering and scientific studies:			
Conservation in agriculture		50,000	80,000
Water quantity management and control	179,000	206,000	250,000
Water quality and ecology	483,000	500,000	480,000
Planning research	100,000	60,000	175,000
Engineering research:			
Concrete and structural	219,000	235,000	270,000
Hydraulics	284,000	390,000	280,000
Electric power	250,000	295,000	300,000
Geotechnical	92,000	105,000	100,000
Materials and instrumentation	441,000	789,000	630,000
Advanced energy application	473,000	478,000	450,000
Dam safety	1,005,000	1,081,000	1,100,000
Lab equipment and maintenance	545,000	700,000	650,000
Water research		6,000,000	470,000
Total	9,068,000	15,182,000	9,950,000

Question. In your professional opinion, setting aside budgetary problems and your direction to support the administration's budget at all cost, is the 1984 research and development effort sufficient to support your increasing program?

Answer. The program-related engineering and scientific studies effort is not sufficient to provide optimum support of the Bureau's total program. Many ongoing studies could be funded at higher levels to obtain earlier results and application in the field. Further, we have identified $780,000 of additional capability involving high-priority projects in several areas including water conservation, electric power, hydraulics, remote sensing, water quality, and concrete. In addition, the laboratory facilities and equipment have deteriorated during the past few years of budget constraints allowing that portion of this program to slip in order to keep our highest priority studies underway. To replace obsolete and wornout equipment and improve the facilities will require an effort spread over several years.

The atmospheric water resources management program budget is adequate to perform the highest priority items. However, there are priority research activities under this program for which an additional capability exists:

1. Development of a comprehensive program plan for the Colorado River enhanced snowpack test to accelerate the demonstration of an operational capability—$2 million.
2. Research aircraft development of cloud seeding technology by the University of North Dakota—$750,000.
3. Initiation of a randomized seeding experiment on additional cloud types under the Sierra cooperative pilot project and associated downwind effects studies—$1 million.

ATMOSPHERIC WATER RESOURCES RESEARCH

Question. In action on the 1983 budget, the committee deleted funding for initial field studies and equipment procurement for the Colorado River augmentation program. What work is planned for 1984 for the Colorado River augmentation program? Is any operational or demonstration work planned? If so, specify the type of work and associated funding.

Answer. As directed by Congress, the Bureau will be continuing its planning effort for the Colorado River enhanced snowpack test (CREST) program. This will include preparation of a comprehensive program plan to support CREST authorizing legislation currently being developed. This proposed legislation will provide specific authority to conduct a demonstration program in the Colorado River basin. Operational or demonstration activities will not be conducted during 1984 unless specifically authorized by the Congress.

Question. Why has the name of the program been changed to Colorado River enhanced snowpack test?

Answer. The program name has not been changed. The Colorado River enhanced snowpack test is a proposed demonstration program designed to rigorously test and quantify the capability of cloud seeding to augment the flow of the Colorado River.

Question. What portion of the atmospheric water resources research request is to utilize the capabilities of the University of North Dakota? Please be specific by type of work and dollars requested.

Answer. University of North Dakota work for fiscal year 1984 constitutes one-twelfth of the Division of Atmospheric Resources Research budget and includes $250,000 for cloud-top seeding development using the Cheyenne aircraft and $100,000 for radar data processing and analysis for the Sierra cooperative pilot project.

Question. Why is the budget request for planning, special studies and other support increasing from $318,000 to $600,000 in 1984? Provide a detailed breakout for the record of how this increase will be used by activity and how that compares with the 1983 level of funding.

Answer. The increase in this line item resulted from a redistribution of computer support and associated study costs in response to changes in emphasis in the program and does not represent an increase in overall program costs. Submitted for the record is a detailed breakout of how this increase will be used by activity and how that compares with the 1983 level of funding.

INCREASE OF BUDGET REQUEST FOR PLANNING, SPECIAL STUDIES, AND OTHER SUPPORT

	1983	1984
Computer facility and network support	$225,000	$350,000
Colorado River:		
Cloud climatology	25,000	50,000
Satellite studies	25,000	50,000
System design	25,000	125,000
Other research studies	18,000	25,000
Total	318,000	600,000

DELAYS ON ONGOING WORK

Question. Now, Mr. Commissioner, your statement goes to great lengths to discuss the impacts of operating under the continuing resolution. Isn't it true that a lot of the contracts which will be slipped would have been delayed in many instances regardless of whether you had an enacted appropriations bill or not? For example, the salinity work under title I has been delayed for several years because the associated research required has not been completed. So a 1- to 2-year slip is not unusual and certainly is not due to funding availability?

Answer. Yes, you are correct, there are several contracts which have slipped due to nonbudgetary reasons. Although we plan and budget our programs to operate on a realistic schedule, there are always some unforeseen problems that may arise to slow our programs down. However, we did have about 100 contracts which we had to slip in fiscal year 1983 because of the continuing resolution.

Question. How many of the contracts being slipped are on the critical path to project completion?

Answer. Contracts are slipping on 14 projects where completion dates have been delayed at least 1 year or more.

ROGUE RIVER BASIN, GRANTS PASS, OREG.

Question. What is the current status of work on the Rogue River basin, Grants Pass study?

Answer. We have identified ways to modernize the Grants Pass Irrigation District's aging system and have found potential long-term solutions to anadromous fish passage at Savage Rapids Dam on the Rogue River. A report was provided to the public summarizing these preliminary findings. Support for and willingness to share costs of irrigation system rehabilitation appears to be lacking; the irrigation part of the feasibility study was concluded in fiscal year 1982. There is support for solving the fish passage problem at Savage Rapids Dam and we will direct our planning effort toward that end. However, we will not be able to do this until the powerplant issue regarding the site is resolved. Private power interests have recently sought to construct a powerplant at Savage Rapids Dam. Oregon law restricts this reach of the Rogue River from hydroelectric development and power interests have not been successful in having this restriction removed.

Question. I note that you have requested only $5,000 to continue work in 1984. How will these funds be used?

Answer. Only minimum activities will be performed in fiscal year 1984, such as coordination work with the State and other agencies necessary to keep current on the powerplant development situation. We plan to regenerate our plan formulation work in fiscal year 1985 if the powerplant issue is resolved. We have discussed this program with fishery agencies and have their concurrence.

Question. Does the powerplant development appear feasible and, if so, are you aware of any effort to change the State law which prohibits such development in the Rogue basin?

Answer. Private power interests have recently sought to construct a powerplant at Savage Rapids Dam. We have not looked at the feasibility of a Federal powerplant at the site. Oregon law restricts this reach of the Rogue River from hydroelectric development and power interests have not been successful in having this restriction removed. Since construction of a power facility would have a major influence on plans for fish passage, we have had to delay our work while the power issue has been under consideration. We expect this issue to be considered in the current session of the Oregon Legislature. In the interim, we have discussed possible passage options with fishery agencies to reach agreement on the remaining work to be done.

UMATILLA BASIN STUDY

Question. I note that $260,000 is budgeted to continue the Umatilla basin study in Oregon. What work is planned for 1984? Please be specific.

Answer. Public response to the working document has been good and we are now focusing in on a recommended plan. In fiscal year 1984, we will complete our refined designs and cost estimating and economic, environmental, and social analyses on the recommended plan. We will also begin preparing our planning report.

Question. What is the reason and need for the extensive plan formulation work proposed and how is it different from the normal planning requirement?

Answer. The Umatilla basin study has been delayed 1 year because of the extensive formulation work necessary to find development potentials that would satisfy objectives of both Indian and non-Indian interests. We have completed our preliminary planning and have identified some possible solutions to the basin's water problems.

Question. In your professional opinion, is this extensive plan formulation work required?

Answer. The work is not too different from the normal planning process, but identifying a solution which satisfies objections of Indian and non-Indian interest has been challenging. The plan formulation activities were necessary. The Umatilla tribes, irrigation districts, Northwest Power Planning Council, and fishery interests are all supporting the effort and with this unity, prospects for positive action look better than at any time in the past.

KLAMATH PROJECT, UPPER KLAMATH OFFSTREAM STORAGE STUDY

Question. Update us on the work being done on the Klamath offstream storage study.

Answer. Initial appraisal studies have begun on the area. Significant geologic problems have been identified. Work is proceeding on additional studies to evaluate the geologic problems. Identification of water needs has also begun. Geologic problems may be severe enough to make the project unfeasible.

During the remainder of fiscal year 1983, we intend to conduct hydrologic, economic, and environmental analyses of offstream storage options at the Long, Round, and Aspen Lakes sites. Decisions from the initial preliminary findings stage of the study are expected to result in concluding the study in fiscal year 1983.

Question. The committee understood that the Bureau had contracted with a private consultant to analyze the hydrologic condition in the project area, which was the main item of concern. Could you tell us about that work and how the Bureau plans to proceed, assuming a favorable recommendation?

Answer. The geologic condition of the area is the main concern. Our initial evaluations indicated that there are significant geologic problems related to the volcanic origin of the region. We question the feasibility of storing water in the reservoir site under consideration due to leakage through fractures that are remnants of past volcanic activity. Shannon & Wilson, Inc., an independent consultant, hired by the Bureau of Reclamation and the Pacific Power & Light Co., is reviewing two aspects of the reservoir site: One, the effectiveness of silt overburden, already deposited on the bottom of the reservoir site, to provide an effective seal; and two, the fractured sides of the reservoir where there is no overburden.

We are looking at a three-reservoir complex with a total capacity of between 1 and 2 million acre-feet. The contractor has completed some analysis of the bottom overburden at all three reservoir sites and indicates that at initial filling the bottom of the three reservoirs would leak at an initial rate of 670,000 acre-feet per year under the most favorable analysis of the data collected. The contractor has completed no work on leakage of the reservoir sites. Based on this incomplete analysis, the consultant's preliminary report indicates that a reservoir could be constructed at the site. We have asked the consultant to reanalyze the reservoir bottom more realistically and to make an analysis of the reservoir sides before submitting the final report. Our technical personnel recently reevaluated the situation, taking into consideration the contractor's draft report, and are still of the opinion that a feasible project cannot be built. We expect to receive the consultant's final report by late April 1983, at which time we can further define the outlook on this study.

Question. Are you prepared to make a final recommendation on the likelihood of a project as requested? If not, why?

Answer. No; we are not prepared to make a final recommendation on the project at this time. The question of the reservoir geology has proven to be a bigger issue than we had anticipated.

Question. Why can't you make a final recommendation and what will it take to get to that point?

Answer. We will be in a position to make a final recommendation when our consultant has completed his final report of the reservoir geology and our engineers have had a chance to evaluate the findings. We anticipate we will be able to make a final recommendation this fiscal year.

Question. Review briefly the need for storage in the Klamath basin and the expected benefits and associated cost of the project.

Answer. The proposed pump storage plan would store surplus flows from upper Klamath Lake for later release through its own generation facilities as well as existing and expanded downstream Pacific Power & Light Co. facilities on the Klamath River. In addition to power generation, the multipurpose offstream reservoir functions may include irrigation and municipal and industrial water supplies, recreation, fishery, and water quality benefits. The cost of the project will greatly depend on the results of the geology analysis. Therefore, meaningful costs estimates are not available at this time.

TUALATIN PROJECT (HENRY HAGG LAKE PERIMETER ROAD), OREGON

Question. Mr. Commissioner, what is the status of repair and replacement of the perimeter road at Henry Hagg Lake? How is the work holding at the slide areas already completed?

Answer. There are six slide areas affecting the perimeter road at Henry Hagg Lake which caused problems for several years. Some of the slide areas have been contained with no further damage but the most serious ones, slides 1 and 4, are still causing problems. Temporary measures were taken last year to allow continued passage around the lake until permanent solutions could be implemented. Recent rains this winter have caused additional sliding in areas 1 and 4, causing blockage of the road.

The Bureau has been working closely with Washington County to develop engineering solutions to the two remaining slides and we expect Washington County to award a construction contract this summer for road repairs. The road repairs will consist of minor changes to the existing alinement but will not require any additional right-of-way. The Bureau is providing engineering assistance and funds for this work.

SANTA MARGARITA PROJECT, CALIFORNIA

Question. Bring the committee up to date on the Santa Margarita project studies which are scheduled to be completed in 1984.

Does the State of California support the project? What level of cost sharing is being considered for each project purpose, including recreation and flood control; and how does this compare with historic or traditional levels? Could you initiate construction on this project in 1984 if it were authorized?

Answer. The State of California did not support project authorization during the hearings on S. 2684 in the 97th Congress. We understand that the local project sponsors are to meet with the new director of the State of California Resources Agency during the week of February 28 and we are very optimistic about the outcome of that meeting.

The Fallbrook Public Utility District has agreed to provide land within the Fallbrook Reservoir right-of-way owned by the district and worth over $8 million as part of their up-front funding, along with additional moneys toward allocated project costs for

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municipal and industrial water. They also will repay 100 percent of the allocated municipal and industrial costs, including interest, and 100 percent of the allocated agricultural water costs. Additionally, they will pay one-half of the cost of recreation facilities, including interest. Allocated flood control costs and cost of service allocated to the Navy are expected to be paid through funding provided by the Department of the Navy during construction of the facilities. Historically, the land owned by the district would have been purchased by the Government and become a project cost to be repaid by the district as part of its repayment of 100 percent of the costs allocated to the district. Costs incurred to provide service for the Department of the Navy and for flood control would have been historically considered nonreimbursable.

If authorized, we could move ahead with final designs and preconstruction activities leading toward construction contract awards early in fiscal year 1985.

O'NEILL UNIT, NEBRASKA

Question. What is the current status and schedule for resolving the litigation pending against the O'Neill project in Nebraska?

Answer. The March 1977 court injunction forbidding construction of the O'Neill unit until the environmental impact statement has been adequately supplemented remains in force. The final supplement No. 2 to the O'Neill unit final environmental statement discussing the issues required by the court was filed with the Environmental Protection Agency on July 24, 1981, and was sent to the district court on August 13, 1981, along with a motion to vacate the existing injunction. In April 1982, the plaintiffs filed a motion to add eight new issues to the original court action. Four of the eight additional issues were rejected by the court and the plaintiffs filed a further amended complaint in June 1982. The final brief on these issues was filed with the court in mid-October 1982. To date, the court has not filed a ruling on allowing introduction of the new issues. Following the court rulings on these pretrial issues, an evidentiary hearing will be held, probably this fall.

Question. Is the use of the $1,570,000 budget request contingent upon resolving the legal problems surrounding the project?

Answer. Yes, it is. Upon removal of the 1977 injunction by the U.S. district court, we will use these funds to prepare specifications for the construction of Norden Dam and award a contract to improve the county road for access to the damsite.

AQUATRAIN PROJECT

Question. What is the status of the Saline Water Use and Disposal Opportunities Unit (Aquatrain) studies and activities to date?

Answer. To date, a great many activities have taken place on the Aquatrain project. On July 1, 1982, Reclamation established, under the direction of our regional director in Salt Lake City, Utah, a Saline Water Transport and Use Office in Denver, Colo., to be the Federal focus for Aquatrain studies. On November 2, 1982, a cooperative agreement between Reclamation and Aquatrain, Inc., a subsidiary of W. R. Grace and Co., was executed defining relative roles and responsibilities. That cooperative agreement confirms the division of responsibilities contained in Under Secretary Hodel's April 22, 1982, letter committing the Department of the Interior to work with W. R. Grace and Co. and provides for housing the key non-Federal participants jointly in Reclamation's Saline Water Transport and Use Office.

Through a large number of meetings, arranged by Grace, Aquatrain, Inc., and Reclamation, the potential participants have been contacted and invited to participate. Representatives of the environmental community have been contacted and a productive dialog continues. With regard to water rights issues, legislation to authorize the Secretary of the Interior to enter into a joint venture with industry for beneficially using Colorado River saline water in accordance with State law was drafted by the Colorado River Basin Salinity Control Forum and will be reintroduced to the 98th Congress. Finally, a draft plan of study is in the review stage. The plan of study is a working document to display authority, project purpose, organization and management, resources, and schedules necessary for accomplishment of stated study goals.

SCHEDULE FOR COMPLETION

Question. What are your anticipated schedules regarding the Saline Water Use and Disposal Opportunities Unit, Aquatrain project?

Answer. Under current schedules, which assume availability of needed funding, corridor and plan formulation alternatives should be identified by spring of 1983, with award of contracts for environmental studies expected by late summer 1983. Technology development and financial/economic studies will proceed concurrently with environmental studies. All necessary proof of concept studies are expected to be completed by midyear 1985 and with authorization, construction initiated in 1987 and completed in 1989.

FEDERAL AND NON-FEDERAL ROLE

Question. Please explain the Federal role in the Saline Water Use and Disposal Opportunities Unit, Aquatrain project.

Answer. The Federal role will assess ways of disposing of saline water from the Colorado River in a cost-effective fashion including the merging with coal-based energy resources development for cheaper power generation in this country as well as for possible export purposes. As such, the Department of the Interior, through the Bureau of Reclamation, has reserved unto itself the overall project environmental analysis, corridor selection, and Federal permit issuing activities. By interagency agreement, the Bureau of Land Management will provide significant support to Reclamation throughout the planning process. Specifically, the Bureau of Land Management will assist in the preparation of environmental studies and rights-of-way identification in accordance with the National Environmental Policy Act and the Federal Land Policy and Management Act, respectively.

Other Federal agencies, such as the Forest Service, Fish and Wildlife Service, National Park Service, and Western Area Power Administration, will provide technical support during various phases of project planning.

Question. Please explain the non-Federal role in the Saline Water Use and Disposal Opportunities Unit, Aquatrain project.

Answer. Aquatrain, Inc., a wholly-owned subsidiary of W. R. Grace and Co., has agreed to assume: (1) Technology development responsibilities for the saline water coal transport pipeline; (2) seek to broaden the consortium by including coal users, transportation interests, and other coal producers; and (3) develop procedures for financing the non-Federal share of the project. The cooperative agreement and subsequent working agreements between Reclamation and Aquatrain, Inc., detail the respective responsibilities.

NATIONAL WATER RESEARCH PROGRAM

Question. What activities and progress do you anticipate for the national water research program in fiscal years 1983 and 1984?

Answer. The $6 million appropriated under the fiscal year 1983 Interior and Related Agencies Appropriations Act will be used in fiscal year 1983 to administer and close out water-related research projects transferred to the Bureau of Reclamation from the former Office of Water Research and Technology by secretarial order in August 1982. The program also will continue high-priority, water-related research in the broad categories of water reuse, ground water management, brackish water utilization, water conservation and use efficiency, saline water conversion, and technology transfer as described in the Water Research and Development Act of 1978 and as directed by the 1983 Appropriations Act. We will make every effort to fully utilize the fiscal year 1983 funds in fiscal year 1983, recognizing the restraints on time available, the complexity of sorting out national needs and priorities, and the need to make wise use of the funds.

The $470,000 requested for fiscal year 1984 will be utilized to close out remaining projects transferred to the Bureau of Reclamation upon termination of the Office of Water Research and Technology as an agency. This will include providing technical assistance and oversight in administering use agreements which we have negotiated with the town of Wrightsville Beach, N.C., and the city of Roswell, N. Mex., to operate the Wrightsville Beach and Roswell test facilities, respectively.

ROSWELL, N. MEX., AND WRIGHTSVILLE BEACH, N.C., TEST FACILITIES

Question. What is the status of the Roswell and the Wrightsville Beach test facilities?

Answer. Both test facilities have been transferred to local municipalities for operation without continued financial support from the Department of the Interior. The city of Roswell, N. Mex., will operate the Roswell Test Facility and the town of Wrightsville Beach, N.C., will operate the Wrightsville Beach Test Facility. In each case, a use agreement has been signed between the Government and the respective municipality. The Roswell agreement was signed on January 12, 1983, and the Wrightsville Beach agreement on January 25, 1983. The expiration date for both agreements is December 31, 1983.

During the effective period of the agreement, the Government retains title to all property. Both facilities will be used for water resources and desalination research and development. The Wrightsville Beach Test Facility will also be partially used by the State of North Carolina for related marine research efforts and by the town for other public functions. Unless there is a change in legislative authority, it is our intent to close down the two facilities at the end of the agreements, declare them excess to our needs, and turn them over to the General Services Administration for disposal. We understand there is legislation proposed to be introduced in the Congress which would transfer both facilities to the respective municipalities on a permanent basis.

STATUS OF PROGRAM ACTIVITIES

Question. What were the activities transferred to the Bureau of Reclamation upon termination of the Office of Water Research and Technology as an agency and what is their status?

Answer. The water research and development, saline water research and development, State water institute matching grants, technology transfer, and the reimbursable international program were transferred to the Bureau of Reclamation. The State water institute annual cooperative program was transferred to the Office of Water Policy, and the Water Research Scientific Information Center was transferred to the Geological Survey.

Our original mission was to continue the ongoing activities through an orderly phaseout with carryover funds. The reimbursable international program activities have been placed in our Division of Foreign Activities for administration. We have established a separate office to administer all other activities transferred to us.

Over 770 active and inactive contracts, grants, and agreements requiring monitoring, handling, and closeout from a business management standpoint were transferred to us. We have reviewed all of those files to determine what actions remain to close them out. About 160 are scheduled for completion during fiscal years 1983, 1984, or 1985. Over 600 scheduled for completion in prior years remain to be closed out.

NEW CONSTRUCTION STARTS

Question. Would you elaborate on those projects for which planning has advanced to the stage that construction could be started in fiscal year 1984?

Answer. Yes, we have five projects which could be advanced to the construction stage in fiscal year 1984. They are the Palisades powerplant enlargement, the Narrows unit, the Hoover uprating and facility improvements project, the Santa Margarita project, and the Animas La Plata project.

PALISADES POWERPLANT ENLARGEMENT

The Palisades powerplant enlargement and appurtenant facilities are located on the Snake River in southeast Idaho. The existing Palisades powerplant has four units with a total installed capacity of 119 megawatts. The enlargement includes extension of the existing powerhouse and the construction of additional generating units. These units will be added to the powerplant with no change in the present reservoir operation, Snake River flows, or effect on existing water rights. The resulting increased annual energy production is needed in view of the national energy shortfall and because hydroelectric generation is nonpolluting, it is desirable to develop all feasible, least-cost energy sources at the earliest possible time. Power generated by this project is needed in their area which experiences seasonal shortages in both firm and peaking power. The direct benefit-cost ratio for this project is 3.1 to 1.0. The total cost is estimated to be $76.4 million with initial funding needed of $500,000 to be used for gathering design data and issuance of specifications for site preparation. This project requires authorization but is included in S. 268 presently before the Congress. The State of Idaho has expressed interest in cost sharing the development of the project.

NARROWS UNIT, COLORADO

The Narrows unit was authorized for construction on August 28, 1970, by Public Law 91-389. Preconstruction planning funds were appropriated in fiscal year 1972. New construction start approval was given in 1975 and land acquisition activity began. In fiscal year 1978 project funding was discontinued by President Carter pending further investigation of the project. In 1982 Congress directed the Bureau to resume preconstruction planning activities. Funds are available, pursuant the continuing resolution, to continue preconstruction planning during fiscal year 1983. A supplement to the environmental statement is scheduled to be filed in November 1983. All prerequisites to ready the project to construction are to be completed during fiscal year 1984.

The project will provide supplemental irrigation water to 287,000 acres in a principal agricultural area of Colorado. Also entities in the project area have requested municipal and industrial water supply totaling 21,850 acre-feet per year, but control storage to be provided would reduce periodical flooding experienced in the area.

The total cost of the project is $372 million based on October 1982 prices. The Governor of Colorado has asked for and received a joint resolution from the State legislature in February 1982 to support the expenditure of $25 million toward cost sharing the construction of the Narrows and/or Animas-La Plata projects. There is included in the State's 1982 proposed long-range capital improvement program an indication that cost sharing in the amount of 10 percent of the Narrows unit could be expected. Terms of the precise cost-sharing agreement must be negotiated with the Colorado Water Resources and Power Development Authority.

Construction of the project is estimated to take 12 years. The $500,000 requested will enable the Bureau to resume the purchase of right-of-way and to begin construction of a garage and laboratory building.

HOOVER DAM UPRATING AND IMPROVEMENT PROJECT

The Hoover uprating and facility improvements project is located at the Hoover Dam, east of Boulder City, Nev. Congressional authorization is required. A legislative package for project authorization has been submitted to the Department.

This project includes constructing new facilities necessary to uprate the generating machinery and equipment to provide additional peaking power capability, improving traffic conditions by constructing additional parking areas, eliminating unsafe parking, eliminating potential safety hazards, and reducing tourist congestion at Hoover Dam. The facilities would include new generator windings and other equipment associated with the powerplant, new elevators, improved roadways, and other facilities.

Visitors to Hoover Dam average about 1,800 a day with a total of 21 million visitors since the dam was constructed.

The total estimated cost of this project is $7 million. Funds totaling $1.5 million would be used to complete the design and award a contract for uprating six additional units. The Bureau could begin collection of data and preparation of design and specifications for the parking, visitor facilities, and elevator shafts.

A finding of no significant impact was prepared on September 20, 1979, for the visitor facilities. A categorical exclusion, dated January 24, 1980, was prepared for the uprating program.

SANTA MARGARITA PROJECT, CALIFORNIA

The Santa Margarita project is located in northern San Diego County, Calif., near the town of Fallbrook. The project would consist of two dams and reservoirs on the Santa Margarita River and conveyance lines to serve the Fallbrook Public Utility District and the Marine Corps Base at Camp Pendleton. The project would supply supplemental municipal and industrial water to the district and to Camp Pendleton and supplemental irrigation water to the district. In addition, the project would provide flood control, recreation, fish and wildlife enhancement, and regulation of imported water. The district will participate in the cost of the project by contributing significant amounts of land and upfront financing. The Navy Department will provide 66 percent of the total estimated cost.

Authorizing legislation was introduced in February 1983 under H.R. 1527. The Bureau prepared a feasibility report in 1971 and an environmental statement in 1974. The feasibility study update was initiated in fiscal year 1982 by write-in with a supplemental environmental statement in July 1984. Since a decade has elapsed since the studies were made, a need has arisen to update the geologic and hydrologic data, safety of dams, and seismic analysis. There is also a need to update the wildlife mitigation plan and environmental statement.

The total preconstruction cost of the project would be $4,940,000. Total construction cost is estimated to be $190 million based on January 1982 price level. A total of $500,000 is needed in fiscal year 1984 to obtain additional geological data at the dam sites and to conduct extensive drilling to locate borrow areas and verify the adequacy of identified borrow materials. The project has strong local support as well as support from the Department of the Navy.

ANIMAS-LA PLATA PROJECT

The Animas-La Plata project is a multipurpose project located in Montezuma and La Plata Counties of southwestern Colorado and in San Juan County of northwestern New Mexico. The project was authorized by Public Law 90–537, dated September 30, 1968. The major features of the project include: The 280,000 acre-foot Ridges basin and 70,000 acre-foot Southern Ute reservoirs; La Plata and Southern Ute diversion dams; seven pumping plants ranging in lift from 134 to 525 feet and capacity from 17 to 700 cubic feet a second; and approximately 38 miles of canals and pipelines and approximately 200 miles of laterals. The project will provide 80,100 acre-feet annually of municipal and industrial water supplies to the La Plata Water Conservancy District and the cities of Aztec, Bloomfield, and Farmington in New Mexico; the Ute Mountain Ute Indian Tribe; the Southern Ute Indian Tribe; and Navajo Tribal Utility Authority. It will also provide a full water supply for irrigation of 48,590 acres of new land and supplemental supply for 21,530 acres of presently irrigated land. It is anticipated that project water will allow for more intensive farming and the production of cash crops and dairy products will take place. The total cost of the project is estimated to be $560,151,000 with first year funding of $1.5 million to provide for acquisition or relocation of some utilities and collection of data for final designs. The projectwide final environmental impact statement was filed with the Council on Environmental Quality on July 1, 1980. The definite plan report was approved on August 18, 1980. The repayment contracts with La Plata water conservancy districts in Colorado and New Mexico are scheduled for execution in May 1983 with validation in June 1983. The contract with the Navajo Indian Tribe is scheduled for execution in July 1983. The project has direct benefit-cost ratio of 1.5 to 1.0. There is good local support for the project. The State of Colorado, in the Senate Joint Resolution 6, dated February 3, 1982, provides up to $25 million in non-Federal financing.

SAN LUIS UNIT, CALIFORNIA

STATUS OF REPAYMENT CONTRACT

Question. What is the status of negotiations on the repayment and water service contracts with the Westlands Water District?

Answer. Negotiations for amendatory water service and repayment contracts with Westlands Water District are at a standstill pending resolution of a recently initiated lawsuit brought against the United States by the Westlands Water District.

Water to the district has been delivered under a series of short-term water service contracts since 1965. The district officials were advised on May 26, 1981, that no more temporary water service contracts would be approved following expiration of the 1981 temporary contract unless negotiations on long-term contracts were completed.

Since water deliveries could have been terminated on January 1, 1982, the district filed suit on July 24, 1981, seeking preliminary and permanent injunctions to prevent the termination of water deliveries. A court-approved stipulation has been entered into with Westlands allowing water deliveries to continue until the litigation is settled or

December 31, 1984, whichever occurs first. The principal issues the court has been asked to resolve are: Whether the district has a right to 1,100,000 acre-feet of water from the San Luis unit at $7.50 per acre-foot plus $0.50 per acre-foot drainage charge, and whether the district has a right to 50,000 acre-feet from the Mendota pool at $3.50 per acre-foot; whether irrigation water service is authorized to areas of Westlands outside of the service area identified in the 1955 feasibility report for the San Luis unit; and whether the San Luis drain is a main project feature of the Central Valley project or whether it is a facility to be specifically repaid by Westlands.

Westlands will pay the Federal rates for water. However, the difference between the Federal rates ($13.30 and $9.30) and the rates Westlands contends it is entitled to ($7.50 and $3.50, plus $0.50 per acre-foot for drainage service) will be deposited into an interest-earning trust fund. The court will determine the disposition of the trust fund upon resolution of the litigation. Municipal and industrial water rates are also an issue, but a minor one compared to the agricultural water rate issues.

IMPACT OF APPROPRIATION CEILING

Question. Has the lack of an increase in the appropriation ceiling required you to defer any work on the San Luis unit?

Answer. Yes, major San Luis unit distribution and drainage system work has been delayed because of a need for an increase in the appropriation ceiling. Reauthorization of the unit is necessary, but environmental problems associated with the San Luis drain north of Kesterson Reservoir must be resolved before we ask Congress for an increase in the appropriations ceiling. Several major contracts pertaining to completion of Westlands Water District distribution and drainage system facilities have been deferred as has work on the southernmost portion of the drain.

AUBURN DAM, CALIF.

Question. What investigations must be undertaken prior to the initiation of final designs for Auburn Dam and how long will these investigations take?

Answer. There are nearly a dozen areas that impact the design process of Auburn Dam. To examine these aspects, we estimate that a study period of 3 years and $23 million will be required. These studies will be tied into the actual specifications design for the prime contract for Auburn Dam and powerplant.

The particular areas that will be reviewed are: Feasibility cost estimates for any legislation required; dam analyses to confirm final configuration for design; dam modeling and testing to confirm and verify analytical studies; concrete testing to confirm dynamic tensile strengths; foundation treatment and drainage studies to allow the early design of foundation completion requirements; flood studies in cooperation with the studies underway by the Corps of Engineers; hydraulic modeling and testing to allow early designs on the spillway gates, chutes, and plunge pool; bridge layouts to assess the revised joint spacing and top-of-dam requirements; powerplant layouts to confirm chamber sizes for units, transformers, switchgear, transformer circuits, and cableways; design of visitors' facilities and a concept for authorization of same; and coordination with power partner entities for the switchyard designs.

PROJECT AUTHORIZATION

Question. What is being done to resolve the issue of reauthorization of Auburn Dam?

Answer. Studies made to establish the details of a plan to protect existing lower American River flows and to satisfy concerns of the State of California regarding project economics have been completed. The report and supplemental environmental statement are being processed with completion scheduled for fiscal year 1984. We are working toward non-Federal cost-sharing arrangements with several agencies and organizations who have indicated a willingness to participate financially in the unit. Reauthorization is required to incorporate protection of river flows as a project purpose, to permit the cost-sharing proposals, and to increase the unit's appropriations ceiling.

Question. Will additional legislation be required for Auburn Dam?

Answer. Yes, reauthorization will be required to increase the appropriation ceiling before construction of Auburn Dam can begin. In addition, the former Secretary of the Interior stated that issues related to the flows in the lower American River below the dam must be resolved before the reauthorization of the unit can be sought. A conceptual plan has been developed which would resolve these issues. The plan involves additional facilities and purposes not now included in the unit's authorizing act and, hence, further authority will be required before they can be implemented Reauthorization will also be required to permit non-Federal cost-sharing proposals for the unit. We are working toward cost-sharing arrangements with several agencies and organizations who have indicated a willingness to participate financially in the unit.

FINANCIAL PARTICIPATION OF NON-FEDERAL INTERESTS

Question. Have any non-Federal entities expressed interest in financial participation in the construction of Auburn Dam?

Answer. Yes, on the basis of a series of meetings held with a number of non-Federal entities to inform them about the estimated costs and accomplishments of the Auburn-Folsom South unit and the need for non-Federal financing to get construction of the unit underway, there has been widespread interest in financial participation in the project.

Letters of intent to participate financially in the construction of the project have been received from the following non-Federal entities: American River Authority, Sacramento Municipal Utility District, East Bay Municipal Utility District, Modesto Irrigation District, American Hydroelectric Development Corp., and Cushionrail. In addition, letters of interest have been received from the Turlock Irrigation District and the East San Joaquin Water Users Association which represents several irrigation districts in San Joaquin County.

AUBURN-FOLSOM SOUTH UNIT, CALIFORNIA

STATUS OF ALTERNATIVE STUDY

Question. What is the status of the $1.3 million Folsom South-lower American River alternatives study and when will it be completed?

Answer. A draft of the study has been completed and is under review in the Washington office. However, evaluation and development of possible non-Federal financial participation and processing of the report/supplemental environmental statement will require an additional year or more. It is estimated that the study will be completed by about February 1984. A cost allocation and repayment analyses of the expanded unit along with specific arrangements for possible non-Federal financial participation will be included in the financial analyses.

SAN LUIS PROJECT, CLOSED BASIN DIVISION, COLORADO

Question. What will the proposed new mitigation plan for the Closed Basin division do and what impact does the proposed legislation have on its implementation?

Answer. We have determined that replacement of the Mishak Wildlife Refuge with the proposed Russel Lakes Wildlife Management Area is a major change and legislative authority is required. Draft legislation was introduced as Senate bill 2677 on June 24, 1982, by Senator McClure. There has been no action since that time. A final supplement to the environmental statement was filed on the new plan on September 30, 1982.

Without early legislative action, scheduled mitigation activities will not occur concurrently with construction. This will affect proposed project construction plans as the new mitigation package was developed to mitigate the losses on each stage as they occur.

MCGEE CREEK PROJECT, OKLAHOMA

Question. Why is a supplement to the environmental statement being prepared for the McGee Creek project?

Answer. A supplement to the environmental statement is being prepared because of a change in our land acquisition plans. Provisions in the fiscal year 1982 Appropriation Act direct that the original plan of acquisition of land in fee title be changed to that of subordination of mineral interests in the conservation pool area, natural scenic recreation area, and the wildlife management area. The change will allow the present owners the right to explore and extract minerals under restrictions required to protect the project. Since this was not envisioned in the authorized plan or the existing environmental statement, a supplement will address this concept change and the impacts of potential mineral development on project lands. We expect to complete the supplement in early fiscal year 1984.

COLUMBIA BASIN PROJECT, IRRIGATION FACILITIES, WASHINGTON

Question. What is the status of efforts to undertake additional development on the Columbia basin project irrigation facilities?

Answer. Negotiations are expected to begin this year for further development. Factors which have delayed negotiation progress to date are: (1) Concerns over excess land laws and implementation of the Reclamation Reform Act; (2) disagreement of the landowners and the districts over the ability to pay; and (3) the relationship of new agreements to the existing repayment contract. Interest by the landowners and other local groups for development has been increasing and attitudes are improving.

Progress leading toward development of additional acreages was made in 1982 when a supplement to the master water service contract was signed by the Quincy and East Columbia Irrigation Districts and the Bureau of Reclamation on October 8, 1982. The supplement is an agreement between the two irrigation districts and the United States which sets forth the terms and conditions for delivery of interruptible water to limited acreages of land in the East and Quincy Districts. Construction and costs of the delivery systems that will carry water to the farms will be the responsibility of the landowners. Under the plan, up to 10,000 acres in each of the districts may receive water from existing project facilities.

With that action now complete, considerable interest is being expressed in exploring cost-sharing possibilities for further development of the project. We expect that exploration of cost-sharing concepts that would lead to further development to be a very high priority item for project beneficiaries in 1983.

SOUTHERN NEVADA WATER PROJECT, SECOND STAGE, NEVADA

Question. What caused the delay of 1 year in the completion date for the southern Nevada water project?

Answer. Completion of the project will be delayed 1 year due to difficulties experienced by the State of Nevada in providing the necessary design data for the automated control system and operational problems being experienced with the pumps and motors; however, initial water delivery was accomplished March 19, 1982, a delay of approximately 6½ months. The design delay was primarily caused by the difficulties associated with interfacing current control technology with the existing stage I control system. The pumping unit problem includes unacceptable vibration levels in the pumps and failure of the 3,000-hp motor flywheels. Further testing to determine the cause of the excessive vibration levels is being conducted and the results analyzed. Action was taken by the contractor to correct the flywheel failure but proved to be unsuccessful; additional remedial work has been approved and initiated. Modification to the units will entail time; however, we do not expect this to interfere with our ability to make water deliveries to meet the 1983 peak summer demands.

SAFETY OF DAMS

Question. A proposal to amend the Reclamation Safety of Dams Act of 1978 to include cost sharing for all safety of dams modifications was introduced in Congress this past year. What effect would cost sharing have on the Bureau's safety of dams program?

Answer. I fully support cost sharing or upfront financing for new Reclamation projects. However, concerning existing federally owned projects, the Government, as owner, has a clear obligation to citizens who may be impacted by a dam failure. Experience has demonstrated that the cost of damage claims and disaster relief following failure of a Reclamation dam will be borne by the Federal Government.

Congress saw the need for the Reclamation Safety of Dams Act to fund dam safety modifications to reduce risk of Federal liability, to alleviate potential unanticipated costs resulting from that liability, and to eliminate unnecessary anguish and cost to citizens when a safety modification is required due to no fault of the water user. The act also provided that when a safety of dams deficiency is due to maintenance neglect by a water user, the total cost for the required modification is rightfully reimbursable to the Federal Treasury.

Cost sharing for safety of dams modifications would diminish these benefits intended to be derived from the act. The time required to obtain cost-sharing agreements will have the effect of slowing down the entire modification process. Dams for which cost-sharing commitments cannot be obtained and continue in operation will carry inherent Federal liability for potential life and property loss from a dam failure. Dams that are drained or restricted in operation incur immediate liability for nondelivery of contracted water and for breach of the Federal Government's historic commitment to water development.

APPROPRIATION CEILING

Question. The budget request for the safety of dams program in fiscal year 1984 is $17.7 million, $6.5 million greater than the current year funding. Briefly outline how these funds will be used and indicate the status of legislation raising the appropriation ceiling for the Reclamation Safety of Dams Act of 1978.

Answer. The 1984 safety of dams budget request of $17.7 million includes $13.4 million for safety of dams modification work continuing on 10 dams continuing from fiscal year 1983, $3.6 million for modification reports and advance specification design work, and $0.7 million for coordination of the Department of the Interior dam safety program.

Although legislation to raise the appropriation ceiling to $550 million and provide other amendments to the Reclamation Safety of Dams Act of 1978 was introduced in both houses of Congress this past year, action was not completed at the end of the legislative session. We anticipate that the legislation to amend this act will be reintroduced this year.

TETON DAM DISASTER ASSISTANCE ACT CLAIMS PROGRAM

Question. What is the status of claims filed under the Teton Dam claims program?

Answer. A total of $400 million has been appropriated for the Teton claims program. As of January 1, 1983, we had paid more than $321.7 million to 7,558 claimants. A total of 7,551 claimants have received final payments totaling more than $314.1 million, and partial payments totaling $7.6 million have been paid to 7 claimants; but $9.4 million remains pending final settlement for the 7 claimants. A total of approximately $25.5 million for four claimants is being processed. A total of 298 claims in the amount of $80 million have been denied; and 24 claims totaling a little over $1 million have been withdrawn. Administrative costs in excess of $7 million have been incurred.

From the $400 million originally appropriated for this program, Public Law 95-629 withdrew $10,125,000 for completion of projects under the adjustment program for the Teton disaster area, of which $277,000 remains unspent; Public Law 96-69 withdrew $19.2 million for reimbursement of American Falls Dam reconstruction costs; Public Law 97-88 withdrew $2 million for the Central Valley project, San Luis unit asbestos fiber program; $7 million has been reallocated for slide repairs on the San Luis Dam, Central Valley project. Public Law 97-257 transferred unobligated funds of $2 million to the middle Rio Grande project to repair the low-flow conveyance channel. The balance for the claims program is $30.9 million.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Question. I understand you are preparing a supplemental environmental impact statement on the Garrison diversion unit. Is there adequate compliance with the National Environmental Policy Act (NEPA) for the work scheduled for fiscal year 1984?

Answer. The work scheduled on the Garrison diversion unit for fiscal year 1984 has adequate National Environmental Policy Act compliance with the exception of some concerns on Lonetree Dam and Reservoir, which will be addressed in the current supplemental environmental impact statement now being prepared. The final decision to award the Lonetree Dam construction contract will not be made until 30 days after the final supplement is filed. The supplemental environmental impact statement also will cover the new fish and wildlife mitigation program which has been jointly developed by the State of North Dakota, the Fish and Wildlife Service, and the Bureau of Reclamation, and is scheduled to be filed with the Environmental Protection Agency in the spring of 1983.

In addition, it will clarify several other issues which may be of concern in the development of the first 85,000 acres of the Garrison diversion unit. These concerns are related to flows in the James River, the operating level of the Lonetree Reservoir, the Lonetree Dam-James River outlet, the James River feeder canal, and not constructing a fish screen in the McClusky Canal.

STATUS OF CONSULTATIONS WITH CANADA

Question. What is the status of consultations with Canada relative to the Garrison diversion unit?

Answer. On April 23, 1981, October 29, 1981, and February 24, 1982, the Governments of the United States and Canada consulted on the Garrison diversion unit and the report of the International Joint Commission. Representatives of Province of Manitoba and the State of North Dakota participated in the meetings. The phased development proposal of the State of North Dakota and the Department of the Interior's report on it were discussed. Copies of the proposal and the report were furnished to Canadian and Manitoban representatives with a request for comment.

A diplomatic note was transmitted to Canada on October 22, 1982, presenting the U.S. intention to proceed with construction of authorized project features that do not affect Canada. This note also reaffirmed the policy of the Government of the United States to consult fully with Canada on the Garrison unit and reiterated the long-standing invitation of the United States to the Government of Canada to consult, study, and monitor development of Garrison diversion unit. Additional consultation sessions are expected to be held in mid-March 1983.

Question. What is the likelihood of limiting construction of the Garrison diversion unit to those lands that drain back into the Missouri River basin?

Answer. The project promoters in North Dakota have been sensitive to Canadian concerns and have proposed a phased construction approach that would allow construction to go forward at this time on the features not affecting Canada. This is known as phase I. The likelihood of this concept being a permanent limit depends upon the future needs of the State of North Dakota and the Garrison Diversion Conservancy District that contributes to project repayment.

The phased construction proposal of the State of North Dakota states that phase II would not be constructed until assurances can be given the Government of Canada that the 1909 Boundary Waters Treaty would not be violated. If phase II could not be completed under these conditions, alternative service areas could be considered for substitution. Phase I allows time for necessary research and studies in the Oakes Test Area to answer water quality and biota transfer questions raised by the International Joint Commission.

We are proceeding with construction of those features that do not affect Canada; that is, those features that drain into U.S. watersheds.

FISH AND WILDLIFE MITIGATION

Question. What is the status of the effort to resolve the fish and wildlife mitigation issue in North Dakota related to the Garrison diversion unit?

Answer. A new mitigation plan covering the first 85,000 acres to be irrigated has been developed by a joint State-Federal committee consisting of members from the Department of the Interior, Bureau of Reclamation, Fish and Wildlife Service, and State of North Dakota. That mitigation plan is directed toward more intensive management of existing and already acquired lands to increase their productivity and improve the habitat value, rather than acquisition and development of additional land. A draft supplemental impact statement is being prepared and a secretarial decision on implementing the plan is expected in July 1983 following filing of the final impact statement.

Question. In the past, you have been directed to purchase fish and wildlife mitigation lands for the Garrison diversion unit from willing sellers only. Have you had much interest from landowners willing to sell land for this purpose.

Answer. Landowners have responded positively to the policy in which the Bureau will buy mitigation lands from willing sellers only. There is currently a list of 72 landowners who have offered to sell 30,685 acres of land for mitigation. Individual offers range in size from 18 acres up to 4,070 acres.

Las Vegas Wash Unit, Nevada

Question. Has the restudy of the Colorado River basin salinity control projects, title II, Las Vegas Wash unit, formulated any alternative plans that may be more adaptable to present or future conditions in Las Vegas Wash?

Answer. Yes. Plans are being formulated for a verification program to demonstrate the effectiveness of bypassing good quality industrial cooling water and isolating localized highly saline ground water, thus preventing it from reaching the Las Vegas Wash. This verification program would reduce the ground water flow in the Pittman, Nev., area by stopping the seepage from unlined ditches which carry industrial wastewater to the wash. This would be accomplished by replacing the unlined ditches with the Pittman bypass pipeline. The resulting reduced ground water flow may reduce the salt load entering the wash by as much as 20,000 tons per year. Continued monitoring will provide data on the ground water response to seepage reduction in the Pittman area.

The Pittman verification program should help demonstrate the potential effectiveness of seepage control and reduction of salt loading from saline soils and localized ground water in Las Vegas Wash. After verification, the control concept could be expanded by construction of a larger bypass channel which would reduce the annual salt load to the Colorado River by an additional 51,000 tons. The preparation of a definite plan for the bypass channel concept for salinity control is scheduled June 1983.

Bonneville Unit, Central Utah Project, Utah

Question. Mining interests have expressed concerns about the location of Jordanelle Dam and Reservoir of the Bonneville unit, central Utah project. What are you doing to respond to their concerns?

Answer. The concerns expressed by the mining interests relate both to the water-holding capability of the proposed Jordanelle Reservoir and the geological adequacy of the proposed Jordanelle damsite for the construction of a safe dam.

With regard to the water-holding capability question, some explorations in the reservoir have been conducted and a hydrogeological consultant, Uintex, Inc., has been retained to prepare an evaluation of the reservoir's water-holding capability. The consultant's report has not been finalized, but the draft report recommends a number of specific studies. Some of these, such as measurement of streams flowing into the reservoir basin, are already underway. Others, such as transmissivity testing of bedrock and surfacial materials in the reservoir basin, will be conducted in the spring and summer of 1983 when weather conditions are more favorable.

With regard to the question of the adequacy of the proposed Jordanelle damsite, we have retained a group of independent consultants to evaluate our current exploration program and interpretation of geologic site conditions. The consultant's report states: "So far as factors of engineering geology are concerned, we regard the Jordanelle damsite as suitable for construction of an appropriately designed embankment dam, provided that investigations yet to be made do not yield new information that is unexpectedly unfavorable."

They also advise that the possibility of seismic movement at the damsite cannot be precluded. They suggest a maximum credible limit for displacement at the site to be 3 meters. Although a displacement of this magnitude is extremely unlikely, it can be accommodated by conventional defensive measures in the dam design. Planned investigations will likely reduce the amount of surface displacement that must be accommodated in the design of Jordanelle Dam.

OPPOSITION TO JORDAN 4 AQUEDUCT

Question. We understand that there has been opposition to the construction of Jordan 4 aqueduct as originally proposed on the Bonneville unit, central Utah project. What is the cause for this opposition and what is the current status?

Answer. The Timpanogos Planning and Water Management Agency, comprised of representatives of seven northern Utah County communities, has raised objection to the construction of the proposed Jordan aqueduct reach 4 and Alpine aqueduct reach 3. The agency objects to the open Provo Reservoir canal and to having additional right-of-way acquired to construct another pipeline corridor through the communities of northern Utah County. (The Provo Reservoir canal and the Salt Lake aqueduct already traverse the area.) They have proposed that reach 4 of the Jordan aqueduct and the Provo Reservoir canal be combined into a single closed structure. This would also reduce the hazards presented by the open Provo Reservoir canal which traverses these communities.

A number of studies have been prepared analyzing the costs of alternative methods of combining the Jordan and Alpine aqueducts with the Provo Reservoir canal. All of these studies indicate that the combined structure would be substantially more costly than the presently planned Jordan aqueduct reach 4 and Alpine aqueduct proposal. We are currently awaiting recommendations from the Governor and his staff regarding resolution of the differences between the Central Utah Water Conservancy District and the Timpanogos Planning and Water Management Agency.

PROJECTS WITH APPROPRIATION CEILING EXCEEDING TOTAL ESTIMATED COST

Question. How many projects for which fiscal year 1984 funds have been requested have a total estimated cost which is greater than the current appropriation ceiling?

Answer. We presently have 12 projects which have a total estimated cost greater than the current appropriation ceiling. In fiscal year 1984, we will not be making any commitment of funds that would be in excess of the authorized ceiling. The projects are: Central Valley project: Auburn-Folsom South unit, San Luis unit (distribution system and drains), and San Felipe division; Chief Joseph Dam project: Oroville-Tonasket unit; Colorado River basin salinity control project: Title I division and title II (Grand Valley, Las Vegas Wash, and Paradox Valley unit); Pick-Sloan Missouri basin program: Garrison diversion unit, North Loup division, and O'Neill unit; Upper Colorado River storage (Public Laws 84–485 and 92–370); Upper Colorado River storage additional (Public Law 90–537); and Washoe project. A summary of the projects is attached:

PROJECTS WITH APPROPRIATION CEILING PROBLEMS—FISCAL YEAR 1984

[In thousands of dollars]

Construction program	Appropriation ceiling authorization	Total estimated cost	Difference	Total appropriation requested through fiscal year 1984
Central Valley project:				
Auburn-Folsom South unit	$1,403,859	$2,024,463	$620,604	$330,763
San Luis unit (distribution system and drains)	236,176	860,937	624,761	230,228
San Felipe division	364,207	377,304	13,097	213,408
Chief Joseph, Oroville-Tonasket unit	70,035	71,065	1,030	47,693
Colorado River basin salinity control:				
Title I division	461,768	484,700	22,932	250,704
Title II (Grand Valley, Las Vegas Wash, and Paradox Valley unit)	296,380	434,415	138,035	65,805
Pick-Sloan Missouri basin program:				
Garrison diversion unit	1,061,960	1,110,700	48,740	191,045
North Loup division	237,204	262,115	24,911	112,148
O'Neill unit	333,830	367,050	33,220	8,009
Safety of dams program	[1]100,000	95,516	(1)	50,486
Upper Colorado River storage Public Laws 84–485, 92–370	2,231,903	2,976,454	744,551	1,342,744

PROJECTS WITH APPROPRIATION CEILING PROBLEMS—FISCAL YEAR 1984—Continued

[In thousands of dollars]

Construction program	Appropriation ceiling authorization	Total estimated cost	Difference	Total appropriation requested through fiscal year 1984
Upper Colorado River storage additional Public Law 90–537	1,443,310	1,464,575	21,265	267,241
Washoe project	186,462	348,696	162,234	37,978
Total	8,427,094	10,877,990	2,455,380	3,148,252

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[1] Although the current estimated Federal obligation for the safety of dams program is less than the $100 million appropriation ceiling, we anticipate that current and future dam safety investigations will identify an additional substantial number of dams which will require modifications for safety reasons. Thus we expect the $100 million ceiling will be inadequate to cover future dam safety work.

OPERATION AND MAINTENANCE PROGRAM

Question. The operation and maintenance appropriation in fiscal year 1983 was $119.8 million and you are requesting $145.1 million in fiscal year 1984, an increase of $25.2 million. Why do you need the increase and for what will it be used?

Answer. Since fiscal year 1981 we have been trying to catch up on operation and maintenance work which has been delayed due to budget cuts. This year, for example, as a result of operating under a continuing resolution, we have $21 million less in new budget authority than what was requested. Consequently, a portion of the increase is required for operation and maintenance work delayed in fiscal year 1983 but funded in fiscal year 1984. More specifically, of this increase, $5.9 million is needed on the Boulder Canyon project primarily to continue the powerplant uprating program at Hoover Dam; $3.1 million is needed on the Central Valley project for generator rewinds on the J. F. Carr and Trinity powerplants, and for the centralized water and power system control equipment; $2.5 million is needed in the North Platte area of the Pick-Sloan Missouri basin program primarily for the uprating of the Glendo and Fremont powerplant facilities; $1.5 million is required for rewinding of a generator at Yellowtail powerplant and for completion of an emergency bypass cable system at Yellowtail Dam on the Pick-Sloan Missouri basin program; $1 million is required on the Columbia basin project to continue replacement of the project's main unit transformers. The balance of the increase of $11.2 million is needed for replacements, additions, and extraordinary maintenance items throughout the 32 projects. Typical of items in this category are trucks and other vehicles, spare transformers, miscellaneous equipment and tools, and major repairs to roads, bridges, and plant facilities, such as elevators.

FLOOD CONTROL BENEFITS

Question. What are the flood control benefits from Reclamation projects and facilities?

Answer. Estimated flood control benefits from operation of Reclamation's project facilities totaled approximately $111 million in 1981. That is almost 66 percent above the annual average of $66.7 million for the 32-year period 1950–81.

During the period 1950–81, the value of cumulative flood control benefits from Reclamation projects totaled $2.1 billion. This is more than 2½ times the $821.4 million total cumulative expenditure allocated to flood control including construction, operation, and maintenance since the first allocation of funds for flood protection in 1926.

KANSAS RIVER AREA REPAYMENT PROBLEMS

Question. We understand that several irrigation districts within the Kansas River area of the Pick-Sloan Missouri basin program have requested that repayment of the construction charge obligation associated with their respective contracts be deferred for 1982. Please elaborate.

Answer. We have received requests from the Almana, Cedar Bluff, Kirwin, Webster, and H&RW Irrigation Districts for deferment of the 1982 construction charge obligations. Water available from the reservoirs in north-central and central Kansas has continued to decline, apparently due to upstream ground water development and soil conservation practices. No water was delivered to these districts during the 1982 irrigation season.

We have completed preliminary negotiations of an amendatory contract with the H&RW Irrigation District in Nebraska to accommodate existing and projected future depletions to the district's water supply. However, as this contract would extend beyond the 50-year repayment term, special authorization will be needed before the contract can be approved. Processing of the proposed amendatory contract has not progressed to the point that relief can be granted from the 1982 repayment obligation without negotiation and execution of a second deferment contract.

RECLAMATION REFORM ACT OF 1982

Question. The Reclamation Reform Act of 1982 was signed into law on October 12, 1982. What steps have you taken to implement the law?

Answer. In order to provide the benefits of the new law to water users as soon as possible, we have issued interim guidelines for implementing the law which will be used until final rules and regulations are completed and published. We are moving ahead with the development and publication of rules and regulations we will need to implement the new law and expect to have proposed rules published in April 1983 and final rules in place by September 1983. In our rulemaking actions, we have held six public hearings throughout the West and in Washington, D.C., to receive comments from interested individuals and organizations on the content of the rules that will be issued. These hearings have provided the public an opportunity to provide input to the rules before the proposed rules have been developed. They also have provided us with a great deal of good data that will significantly enhance rulemaking efforts.

WATER CONSERVATION PROVISIONS

Question. How do you intend to implement the water conservation provisions of section 210 of the Reclamation Reform Act?

Answer. Reclamation developed language for all new and amendatory repayment and water service contracts in 1978. The contractor is required to develop a water conservation plan that includes goals and water conservation measures which will be reviewed at periodic intervals over the life of the contract. We believe our existing procedures meet most of the requirements of section 210 of the Reclamation Reform Act of 1982. The details of the water conservation requirement will be included in the rules and regulations for implementation of that act. Proposed rules and regulations are scheduled for release in April 1983 and we expect to have final rules and regulations published on or before September 30, 1983.

IMPACT ON CENTRAL VALLEY PROJECT

Question. What is the impact of the Reclamation Reform Act of 1982 on the Central Valley project?

Answer. The Central Valley project contains 250 districts that have water service contracts with the United States for project water. There are 125 districts where large ownerships are such that we anticipate that landowners will request a class 1 equivalency determination. Should a detailed land classification analysis be required it is estimated 18 additional temporary staff will be needed in fiscal year 1983. This temporary hiring will be reduced to 14 people in fiscal year 1984. Should a reconnaissance land classification analysis be made on Central Valley project it would require the temporary hiring of 10 people in fiscal year 1983 and this would carry through fiscal year 1984. The decision as to the level of detail required for land classification currently is under review and will be made during fiscal year 1983.

There are 261,708 acres of excess land covered by recordable contract. With implementation of the 960-acre nonexcess entitlement, we anticipate this will be reduced to 187,700 acres, of which 167,000 acres are in Westlands Water District. When the injunction that precludes the sale of excess land in Westlands Water District is lifted, the recordable contract lands will be sold to eligible buyers over the succeeding 7 years.

The anticipated workload for the administration of acreage limitation will require the addition of nine permanent positions by the end of fiscal year 1984. In addition to the temporary staffing requirements for land classification work, 1.5 temporary positions will be needed for accounting work to develop the full-cost pricing requirement of the act.

The total estimated financial impact on the CVP as the result of the Reform Act of 1982, using the detailed method of land classification, would amount to $3.5 million through fiscal year 1985. Using reconnaissance standards for implementation of the Act of 1982, it is estimated to cost $3 million through fiscal year 1985.

LAW ENFORCEMENT LEGISLATION

Question. We understand you are seeking legislation to give the Bureau of Reclamation law enforcement authority. What are you proposing?

Answer. We are proposing legislation to authorize the Secretary of the Interior to obtain adequate law enforcement services at water resource development projects under his jurisdiction.

The Secretary, in connection with resource protection and public use of Bureau of Reclamation project lands, would be authorized to cooperate with State or local law enforcement agencies in the enforcement of State and local laws. Such cooperation could include reimbursement to a State or locality for expenditures for extraordinary services—for example, surveillance and preventive patrols—rendered in connection with Federal administration of an area. Normal law enforcement duties—for example, response to calls—would continue to be supplied by State and local personnel on a nonreimbursable basis.

The proposed bill also would authorize the Secretary to issue regulations concerning resource protection and use of project lands administered by the Bureau of Reclamation. Violation of these regulations would be a petty offense. The Secretary would be authorized to designate Interior employees to issue notices of violation of the regulations.

New Loan Applications

Question. What loan applications are approved or are being processed that could be potential new starts in fiscal year 1984?

Answer. There are two new loan applications that have been approved and eight are in the final stages of processing. Detailed information follows:

[In millions of dollars]

Public Law 84-984/Title of loan	*Total estimated cost*
1. Greater Wenatchee Irrigation District, Washington	$6.8
2. North Cache Water Development Committee, Idaho	25.0
3. Oakdale Irrigation District, California	16.8
4. Rainbow Municipal Water District (cost escalation), California	9.1
5. Galesville project, Oregon	26.0
6. Hidalgo County No. 1, Texas	12.4
7. Gila River Farm No. 2, Arizona	21.4
8. Santa Ana watershed project, California	11.4
9. Ak-Chin Indian Community (east), Arizona	[1]12.2
10. East Bench Gravity Co., Montana	[2]4.4

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[1] Approved by Secretary.

[2] Approved by Secretary; now in OMB.

APPROPRIATION LANGUAGE CHANGE

Question. Why are you requesting that a portion of the general administrative expenses appropriation be set aside as no-year funds?

Answer. The GAE appropriation is currently funded as a 1-year account, which means that any funds not utilized by the end of the fiscal year revert back to the Treasury. Over the last few years the composition of the overall GAE program has changed significantly, such that up to $10.5 million, or 20 percent of the fiscal year 1984 request, will provide funding for procurement of nonproject equipment and related acquisitions. Were funding for capital expenses set aside as a no-year account, it would (1) assure that the procurement process is in no way compromised by the continued pressure of a deadline for obligation of funds, and (2) foreclose the possibility that the Bureau might be forced to seek appropriations in the future for the same acquisitions for which funds had already been appropriated in the event that scheduled obligations didn't actually occur.

SUPPLEMENTAL APPROPRIATIONS FOR FISCAL YEAR 1983 TO COVER PAY RAISES

Question. Is the Bureau of Reclamation requesting a supplemental to cover costs of salary increases granted by Executive Order 12387 and Public Law 97-377?

Answer. Yes, the Bureau is requesting a supplemental appropriation of $5.4 million to cover the increased pay costs. This amount is one-half the total requirement; the balance will be absorbed within existing funds. This absorption may have an impact on program performance, since all Reclamation activities are restricted to the fiscal year 1982 levels of funding pursuant to the Continuing Resolution for Fiscal Year 1983.

QUESTIONS SUBMITTED BY SENATOR DECONCINI

CENTRAL ARIZONA PROJECT

Question. You indicate in your prepared statement that $165.5 million (fiscal year 1984) is for the Central Arizona Project. How much of that sum has been requested for the non-Indian distribution systems?

Answer. Ten million dollars has been requested in fiscal year 1984.

Question. Of the remaining amount, I believe $5.525 million is for work in Nevada and New Mexico. Could you describe that work?

Answer. Approximately $4,659,000 has been requested for work in Nevada on the McCullough-Davis 230-kV transmission line. About $866,000 has been requested for work in New Mexico for planning studies on the upper Gila water supply study.

Question. How much is actually planned to be applied to the construction of the main water delivery system in Arizona?

Answer. Approximately $140.7 million has been requested for the main water delivery system in Arizona. This total excludes work in the regulatory storage division, Gila River division, Indian distribution division, Navajo project participation agreement, and service facilities.

Question. Does the requested amount of $150.8 million for the Arizona portion of the project include the application of underfinancing? If not, what is the estimated sum which will be deducted from CAP construction in fiscal year 1984?

Answer. Underfinancing distribution on a project-by-project basis in fiscal year 1984 remains undetermined at this time. The Bureau-wide total in the construction program, as requested by the President's budget, is $63 million, and the CAP would be assigned a portion of this based on its projected fund requirements at the time. Final distribution for fiscal year 1984 will occur before the appropriated funds are obligated.

Question. What do you estimate your total capability could be in fiscal years 1983, 1984, and 1985?

Answer. Additional capability does exist on the Central Arizona Project. However, in view of the current budgetary constraints we would not recommend that additional funds be added to the fiscal year 1984 amounts requested by the President. The additional capability in fiscal year 1983 is $14.5 million, resulting in a total capability of $152 million. In fiscal year 1984, the additional capability is $41 million for a total capability of $206.6 million. Our estimated fiscal year 1985 total capability is $190.3 million as shown in the fiscal year 1984 budget justifications.

UNDERFINANCING

Question. Could you explain "underfinancing"?

Answer. Underfinancing is a term used to identify the line in the budget justifications entitled, "Undistributed reduction based on anticipated delays" wherever it appears under the construction, loan, and general investigations programs.

Underfinancing is an adjusting entry that reduces the size of the estimated amount needed for a program (appropriation account) to arrive at the actual amount of the appropriation request for that program for a fiscal year. It is applied after the subtotal of the estimates for the individual projects and/or activities within a program is determined. Experience has shown that various unforeseen events happen to several of the projects and/or activities between the time a budget request is developed and presented and the time it is actually executed. During the development process, the impacts of events that cause increases or decreases in estimated needs are kept current up to the time the President's budget submission is made. However, that is 9 months prior to the beginning of the fiscal year. During that 9-month period, as well as during the fiscal year itself, events occur that have negative and positive impacts on the budget request. Experience also shows the net effect of those unforeseen events; that is, those that cause slippage or decrease funding needs and those that increase funding needs, is negative. Accordingly, the line item for "Undistributed reduction based on anticipated delays" can safely be included below the program subtotal to reduce the amount of the appropriation request. We do not consider it prudent to eliminate the underfinancing line and spread the amount of the individual projects and/or activities in the fiscal year budget request to accommodate the unforeseen events.

PROJECT DELAYS

Question. I believe your original request for fiscal year 1982 was about $186.5 million. The subsequent revised request was for $152.7 million, over $33 million less. However, I was told in response to my written questions that the $33 million reduction would result in only a 6-month delay in the delivery of water to Tucson. In fiscal year 1983, your request was for $160.9 million for CAP construction. I understand this amount was reduced roughly $17.3 million to $143.6 million because of underfinancing.

It is my further understanding that another $5.6 million was deducted from the CAP because the Congress passed a continuing resolution instead of the bill as passed by the committee. You indicate in your statement that this $5.6 milion reduction will cause a 2-year delay. If a $38 million reduction causes a delay of only 6 months, how can a $5 million cut cause a 2-year delay?

Answer. The 2-year delay is an accumulated impact caused by the combined effect of the $38 million cut as well as the $5 million cut. Up to a point, construction work can be compressed and slipped, but sooner or later you reach a point where any additional cut will make a major delay, particularly if the engineering work gets rescheduled. The impact of the continuing resolution budget delayed construction contracts on Salt-Gila aqueduct reach 1B, Spook Hill transmission line, and Spook Hill substation, and the 4-mile section of Tucson Division reach 1 into fiscal year 1984. In addition, it is our desire to give priority to construction work which yields water delivery to various entities along the Granite Reef, Salt-Gila, and Tucson aqueducts in that order. Because of these two factors, water deliveries to the Tucson area has been delayed 2 years.

Question. If the Congress directed the Department to continue the projects at the fiscal year 1982 level, shouldn't the funding level for fiscal year 1983 be $148 million instead of $138 million for the Central Arizona Project?

Answer. The 1983 Continuing Resolution, Public Law 97-377, directed the Bureau to operate on a budget at the fiscal year 1982 funding level. This meant that each appropriation was funded at the same dollar level in fiscal year 1983 as it was in fiscal year 1982, except for the application of unobligated funds carried over. To absorb the prescribed reduction of $107 million in the construction program, the Bureau was compelled to look for areas to curtail. Since it was not feasible to terminate ongoing contracts, we found it necessary to slip awards for most of the new construction contracts that were scheduled in fiscal year 1983. Consequently, the level of activity on a number of projects was affected by the continuing resolution in an unequal manner.

SCHEDULE OF WATER DELIVERIES

Question. What is the current target date for the delivery of water to Phoenix and Tucson?

Answer. Initial water delivery via the Granite Reef and Salt-Gila aqueducts to the Phoenix metropolitan area and Pinal County is scheduled for 1985. Water deliveries to northern Pima County and the Tucson metropolitan area are scheduled for 1989 and late 1991, respectively.

1983 FUNDING ALLOCATIONS

Question. Could you list those Bureau of Reclamation projects which will receive more funding in fiscal year 1983 than in fiscal year 1982?

Answer. The following list contains the names of those projects which were appropriated funds in both years:

CONSTRUCTION PROJECTS WHOSE FISCAL YEAR 1983 ALLOTMENT OF NEW FUNDS EXCEEDS FISCAL YEAR 1982

- Brantley project
- Central Valley project:
  - Auburn-Folsom South unit
  - Miscellaneous projects program
  - San Felipe Division
- Chief Joseph Dam, Oroville-Tonasket
- Grand Coulee, third powerplant
- McGee Creek
- Pick-Sloan Missouri River program: North Loup Division
- San Luis Valley, Closed Basin Division
- Orchard Mesa Division (R&B)
- Yakima project:
  - Grandview (R&B)
  - Sunnyside Valley (R&B)
  - Yakima-Tieton (R&B)
  - Sunnyside Board of Control (R&B)
- Boise project, Payette Division (D&MC)
- Chief Joseph Dam, Whitestone Coulee (D&MC)
- Pick-Sloan Missouri River program:
  - East Bench unit (D&MC)
  - Farwell unit (D&MC)
- Washoe (D&MC)
- Weber basin (D&MC)
- Boise project, Block Canyon Dam (SOD)
- Newlands, Lahontan Dam (SOD)
- Orland, Stony Gorge Dam (SOD)
- Rapid Valley, Deerfield Dam (SOD)
- Modification reports and preconstruction planning (SOD)
- Sun River, Willow Creek Dam (SOD)
- Colorado River basin salinity control project:
  - Title I Division
  - Paradox Valley unit
  - Las Vegas Wash unit
- Central Utah project:
  - Bonneville unit
  - Upalco unit
- Dallas Creek project
- San Juan-Chama project

STATUS OF PLAN 6

Question. Could you summarize the status of plan 6?

Answer. Since Secretary Watt's November 11, 1982, tentative selection of plan 6 as the recommended plan of the central Arizona water control study (CAWCS), the planning and environmental clearance process for the plan has continued. The draft environmental impact statement is scheduled for filing in April 1983, and the CAWCS stage III planning report is scheduled for release at the same time. Feasibility designs for New Waddell, Cliff, Roosevelt, and Stewart Mountain Dams are currently underway and will be documented in the CAWCS final planning report and environmental impact statement, both of which are scheduled for completion in December 1983.

A construction program for the features of plan 6 has not been established, although construction of any two of the plan's four dams could begin in the 1986–87 time period. Three major items need resolution prior to establishment of a construction program.

The first is the need to change the authority of the Safety of Dams Act to allow new dams to replace existing dams where a new dam provides the least cost solution to the safety problem. The second is to increase the appropriation ceiling of $100 million in the Safety of Dams Act, since the cost of safety work already identified exceeds that ceiling. The third is to establish priorities for construction of the four dams.

Question. Mr. Commissioner, how many jobs in Arizona can you attribute to the construction of the Central Arizona Project? How many jobs are lost or gained incrementally with every million-dollar change in funding?

Answer. Using an estimated amount of $1.8 billion to complete the Central Arizona Project, we estimate that 36,000 direct non-Federal work-years will be generated. In addition, approximately 63,000 indirect non-Federal work-years will be generated. Not all of the work-years generated will be within Arizona, but a large percentage will be. We estimate that each million-dollar change in appropriations impacts direct employment by 20 work-years and indirect employment by 35 work-years.

COST-SHARING POLICY

Question. Mr. Commissioner, does the Department intend to propose amendments to the Central Arizona Project authorizing legislation to reflect the administration's cost-sharing philosophy? Could you outline the administration's present cost-sharing policy as it regards the CAP? Other authorized projects?

Answer. At this time, we do not see a need to change the present cost sharing, already contained in the Central Arizona Project Act and amendments. Costs, other than those considered nonreimbursable or deferred, will be paid by users. Public Law 97–373 which authorized the cost indexing of the non-Indian distribution system also provides for 20-percent cost sharing of construction by non-Federal interests during the construction of the facilities in addition to repayment of the remaining costs.

We are exploring with local interests the possibility of securing additional up-front moneys for Central Arizona Project construction to insure a timely completion of the remaining features of the project.

The Bureau of Reclamation is currently seeking acceptable cost-sharing arrangements on a project-by-project basis. It will continue to do so in the absence of a formal cost-sharing policy statement. Reclamation does not have a rigid formula that is applied to all projects. Instead, flexibility and sound judgment are exercised to insure that the best financial arrangements to fit the unique circumstances of each project are found.

AK-CHIN SETTLEMENT ACT—IMPLEMENTATION (PUBLIC LAW 95–328)

Question. Public Law 95–328, and subsequent agreements, provide for the delivery of 85,000 acre-feet as a permanent supply of water within 25 years. Although approximately 55,000 acre-feet will be provided through the CAP, an additional 30,000 acre-feet will have to be supplied.

Could you summarize briefly the work that has been completed and the associated costs?

Answer. Work in process and related costs totaling $25,260,623, as of January 10, 1983, are as follows:

The sum of $20,391,939 for designs, specifications, contract document preparation, construction, and monitoring of construction, including professional and technical services, construction of pipeline and reservoir, design data collection North Vekol basin, archeology inventory and analysis, collection pipeline from on-reservation wells to main canal, drilling and grouting observation wells in North Vekol, design data collection (core holes), construction main canals, South Vekol.

For operation, maintenance, and replacement of wells on the reservation, $3,191,190 and $1,677,494 for agreements with other agencies (Geological Survey, Bureau of Reclamation, Bureau of Land Management, and the Western Area Power Administration) for geohydrologic data to monitor impacts of underground withdrawal; review of designs and specifications and contract oversight; processing permits, land acquisition, et cetera; and design of transmission lines and substations.

Question. As planning for the construction of facilities to deliver water from the proposed well field in Vekol Valley has been completed, why has there been no request for construction funds? If the authorization for appropriations under the act is inadequate, will you propose an increase in the authorization or legislation to index the authorization to provide for inflation. If not, what alternatives do you suggest to meet the requirements and understanding of Public Law 95-328 and the water settlement delivery contract?

Answer. To date, $27.76 million has been appropriated to fulfill the obligations of the Secretary under the act. The cost of providing the Ak-Chin Community with an interim water supply of 85,000 acre-feet, including water from a well field in Vekol Valley, will be far in excess of the spending authorization contained in Public Law 95-328. The act authorized appropriations of $43 million. The Department has thus been reluctant to seek additional spending authorization from Congress until it could accurately describe for Congress the full cost of the settlement and until it has determined whether there are any less expensive alternatives.

The evaluation of alternatives is nearly complete. The Department of the Interior has requested a meeting after April 15 with the Ak-Chin Community so that the Department can present its proposal to secure and deliver a requisite supply of water to the Ak-Chin Reservation.

PAPAGO INDIAN WATER SETTLEMENT ACT

Question. What is the status of the Department's request for a fiscal year 1983 supplemental appropriation of the trust funds and other activities mandated by the act?

Answer. The Department will forward a 1983 proposed supplemental budget request to provide funding until expended for essential portions of the Settlement Act.

Question. What is the Department's fiscal year 1984 request under Public Law 97-293? Is it your understanding that funding for the settlement will be handled through the Bureau of Indian Affairs?

Answer. The current fiscal year 1984 budget request does not include an item for implementation of title III of Public Law 97-293. Funding for the settlement, exclusive of Central Arizona Project activities, will be requested by the Bureau of Indian Affairs. The funding for the Central Arizona Project activities is contained in the $155,600,000 requested for fiscal year 1984 of which $4,628,000 is for Indian distribution systems and $20,000 would be utilized in preconstruction planning for Papago Indian facilities.

HEADGATE ROCK DAM HYDROELECTRIC PROJECT, ARIZONA

Question. What is the current estimate of the total cost of the project?

Answer. The current estimate of the Headgate Rock hydroelectric project is $53 million, October 1983 prices.

Question. Mr. Commissioner, the feasibility study and advanced engineering and design work was funded through the Bureau of Indian Affairs under the general authority of the Snyder Act. Does the Bureau have the authority to proceed to construction of this project independent of the Bureau of Indian Affairs?

Answer. Construction of a powerplant at Headgate Rock Dam by the Bureau of Reclamation is authorized under the Snyder Act of November 21, 1921 (42 Stat. 208). This is in accordance with an opinion by the Department of the Interior Solicitor.

SOLAR HYDRO FEASIBILITY STUDY, ARIZONA-NEVADA

Question. Mr. Commissioner, in your fiscal year 1983 budget request you identified $155,000 for the feasibility study of a possible solar energy facility to be operated in conjunction with the hydroelectric plants on the Colorado River. Have you included a similar request for 1984?

Answer. No; we have not included a funding request for 1984.

Question. Do you have the capability to initiate that study in fiscal year 1983 if funds were to be made available? Also in fiscal year 1984?

Answer. We feel that the power concept is being proven by other Federal agencies and non-Federal interests and our studies at this time might duplicate some of these activities. However, if funds are made available, we could investigate the potential of integrating solar power into our hydropower system to supply power for the Yuma desalting plant if other reasonable sources of power cannot be located. Interest by non-Federal entities in sharing funding costs would give this study a higher priority.

RECLAMATION SAFETY OF DAMS

Question. Mr. Commissioner, could you list those projects which have been identified, but which cannot be initiated because of the current authorization ceiling under Public Law 95-578?

Answer. We anticipate the $100 million authorized by Public Law 95-578 will be obligated by the end of fiscal year 1986. Listed for the record are the dams currently identified as possibly needing safety modifications, but, after fiscal year 1986, will be unable to have construction initiated.

DAMS POSSIBLY NEEDING SAFETY MODIFICATIONS

Arizona: Bartlett, Horseshoe, Horse Mesa, Mormon Flat, and Theodore Roosevelt.
California: Casitas, Folsom, Friant, Glen Anne, Lake Tahoe, Stampede, O'Neill, San Luis, Shasta, and Trinity.
Colorado: Fruitgrowers and Olympus.
Idaho: Little Wood River, Palisades, and Soldiers Meadow.
Montana: Como.
New Mexico: El Vado and Navajo.
Nevada: Rye Patch.
North Dakota: Heart Butte and Jamestown.
Oklahoma: Altus, Arbuckle, and Foss.
Oregon: Cold Springs, Fourmile Lake, Ochoco, Owyhee, Savage Rapids diversion, and Warm Springs.
South Dakota: Pactola.
Texas: Twin Buttes.
Utah: Joes Valley and Newton.
Washington: Bumping Lake.
Wyoming: Fontenelle.

Question. Mr. Commissioner, how crucial is it, in your estimation, that the identified dam safety work be initiated? Do you have a preferred time table?

Answer. All of the dams identified as needing safety modification are considered crucial, not only in relation to the potential for loss of human life, but also because of the potentially large property damage and loss of income derived from the storage water.

We are prioritizing our modification schedule to complete construction on those dams which are most threatened first. At our present rate of progress, and provided sufficient funding exists, we anticipate modifying 56 dams by the end of fiscal year 1991.

Question. Mr. Commissioner, is there any real potential for disaster at any of these federally owned facilities? Could you elaborate?

Answer. There is a very definite potential for disaster at these dams. Should an earthquake or flood of sufficient magnitude occur to cause failure of any of these dams, the potential for loss of human life, large property damage, and loss of water users' income is great. The possible cost to the Federal Government for disaster relief far exceeds the cost of modification.

Question. Mr. Commissioner, the administration has testified that the costs of these safety projects should be shared by project beneficiaries. Could you state the administration's current policy? What percent of the costs should be borne by the beneficiaries? Should the Federal share be fully reimbursable?

Answer. Our policy is to follow the language of the Safety of Dams Act of 1978, since this is the law. The administration does support amending the act to maintain a high degree of commitment to get the identified dams modified, yet create an equitable method of repayment from the beneficiaries of this work. We have not formulated a complete policy of cost sharing which has the needed degree of flexibility to be completely equitable, but it does not seem reasonable to expect full reimbursability to the Federal Government when we still retain title to these dams.

Question. Mr. Commissioner, what similarities are there in terms of liability between dam safety programs and flood control projects?

Answer. Flood control projects are normally exempt from liability by virtue of the Flood Control Act of 1928. Many of the Bureau's dams do not have flood control as an authorized benefit and, therefore, may not come under the protection of the act. Also, a failure of one of our dams because of a seismic disturbance may not receive any liability protection.

COST-SHARING POLICY

Question. To your knowledge, does the administration have a cost-sharing policy or a cost-reimbursement policy for Federal flood control projects?

Answer. Presently, flood control is, by law, a nonreimbursable function. Cost sharing for flood control projects has, for the most part, been limited to provision of lands, easements, and rights-of-way by non-Federal entities. The Cabinet Council has deliberated the issue of recommending changes in cost sharing for each of the traditional water project purposes including flood control and agricultural, municipal, and industrial water, recreation, and fish and wildlife enhancement. Public input has been solicited in the Federal Register by Secretary Watt in behalf of the Cabinet Council. In the interim, both the Bureau and the Corps have proposed new projects embracing cost-sharing arrangements that differ from past practice. Regarding flood control, the Corps has proposed flood control projects that incorporated about 35 percent non-Federal financing. This does not necessarily represent the Cabinet Council's final position on flood control.

LOAN PROGRAM

Question. How many loan applications has the Bureau received from Arizona?

Answer. We have received four loan applications from Arizona interests.

Question. What is the status of those loans and do you have established priorities?

Answer. The loan application for Roosevelt Irrigation District—Project No. 2 and the Ak-Chin Indian Community—East project have been approved but have not been funded. The Ak-Chin Indian Community—West project and the Gila River Farms—Project No. 2 applications are currently under review by the Bureau of Reclamation. In addition, a notice of intent to apply for a loan has been received from the Quechan Indian Tribe for a project. Other than the processing of category I loans before category II loans, we have not established any priorities.

INSTALLATION OF ADDITIONAL PUMP, YUMA MESA PUMPING PLANT, GILA PROJECT, ARIZONA

Question. In the fiscal year 1982 appropriations bill as it passed the House there was included $30,000 for an additional regulatory pump and related work at the Gila project's Yuma Mesa pumping plant in Arizona. You again testified as to this need during our hearings on the fiscal year 1983 appropriations. It is my understanding that this energy conservation addition is still needed but that you have not been able to proceed under the continuing resolution in fiscal year 1983; is that correct?

Answer. Yes; both the Yuma Mesa Irrigation and Drainage District, Gila project, and the Unit B Irrigation and Drainage District, Yuma auxiliary project need the additional pump in order for them to operate the system more efficiently.

YUMA MESA IRRIGATION AND DRAINAGE DISTRICT, GILA PROJECT UNIT B IRRIGATION AND DRAINAGE DISTRICT, YUMA AUXILIARY PROJECT

Question. It is also my understanding that the needed funds are already fully covered by repayment contracts with the Yuma Mesa Irrigation and Drainage District, Gila project, and the Unit B Irrigation and Drainage District, Yuma auxiliary project, and that both are current in their obligations to the United States; is this correct?

Answer. Yes; both the Yuma Mesa Irrigation and Drainage District and Unit B Irrigation and Drainage District are current in their repayment obligations to the United States. The Yuma Mesa Irrigation and Drainage District has approximately $368,000 of unused repayment coverage under its May 26, 1956, contract, and Unit B Irrigation and Drainage District has about $114,000 of repayment coverage remaining under its August 22, 1962, contract. The expenditure of funds for the proposed work would extend the repayment period more nearly to the full terms authorized for the contracts.

Question. If language is included in the fiscal year 1984 appropriation bill similar to that included in fiscal year 1982, can you accomplish the work in the fiscal year 1984 Bureau of Reclamation budget now before this committee?

Answer. Yes; provided that $475,000 is appropriated for the Yuma Mesa Irrigation and Drainage District.

SUBCOMMITTEE RECESS

Senator ABDNOR. The committee is in recess.

[Whereupon, at 3:50 p.m. Wednesday, February 23, the subcommittee was recessed to reconvene at 2 p.m. Thursday, February 24.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, APRIL 12, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2 p.m. in room SD-124, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Stennis, and Sasser.

TENNESSEE VALLEY AUTHORITY

STATEMENT OF CHARLES H. DEAN, JR., CHAIRMAN

ACCOMPANIED BY:
S. DAVID FREEMAN, DIRECTOR
RICHARD M. FREEMAN, DIRECTOR
W. F. WILLIS, GENERAL MANAGER
JOHN G. STEWART, ASSISTANT GENERAL MANAGER
BILLY J. BOND, MANAGER, OFFICE OF AGRICULTURAL AND CHEMICAL DEVELOPMENT
GEORGE H. KIMMONS, MANAGER, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION
RICHARD L. MORGAN, JR., MANAGER, OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT
HUGH G. PARRIS, MANAGER, OFFICE OF POWER
THOMAS H. RIPLEY, MANAGER, OFFICE OF NATURAL RESOURCES
HERBERT S. SANGER, GENERAL COUNSEL
LARRY H. EDWARDS, MANAGER, OFFICE OF PLANNING AND BUDGET
J. FREDERICK WEINHOLD, PROGRAM MANAGER, OFFICE OF COAL GASIFICATION

OPENING REMARKS

Chairman HATFIELD. The hearing will come to order.

Today, we are pleased to welcome to the committee the board of directors of the Tennessee Valley Authority who will present testimony in support of the fiscal year 1984 budget request.

On May 18, 1983, we will celebrate the 50th anniversary of the signing of the act creating the Tennessee Valley Authority. Much has been accomplished over the past 50 years that benefits not only the people of the Tennessee Valley region but our country and other countries as well.

The fertilizer development program is a prime example of how regional, TVA activities can support the Nation's balance of trade and also help feed millions of hungry people around the world.

This committee has strongly supported the efforts of the Tennessee Valley Authority and I certainly will be one member who will continue to do so.

Yet at the same time, during these periods of shrinking budget resources, it is most important that each dollar provided be fully justified and used to the maximum potential. So even though we are friends of TVA and support your activities, we still have a responsibility to carefully review your budget request.

I trust that we will have the help of the board and the TVA staff as we have had in the past, so this committee can develop a recommendation for 1984 which is realistic and allows TVA to carry out the objectives of the act.

With that, let me extend a warm welcome to Charles H. Dean, chairman of TVA's board of directors; Directors S. David Freeman and Richard M. Freeman, who are here today; and the members of the staff of the Tennessee Valley Authority, who have traveled from Knoxville for this hearing.

Mr. Dean, please proceed.

PREPARED STATEMENT

We will place your detailed statement in the record and then you can highlight it or present us with the slide presentation, whatever you have in mind.

You may proceed.

[The statement follows:]

STATEMENT OF CHARLES H. DEAN, JR.

I am pleased to be here today to review TVA's budget request of $122.5 million for fiscal year 1984.

This request essentially holds the line at the level of fiscal year 1983 in recognition of the need for budget stringency. It is a tight budget that reflects a careful evaluation of program priorities by the TVA Board in light of its responsibilities under the TVA Act and the needs of the Tennessee Valley region and the Nation. We have cut back in less critical areas and focused available resources on those activities with greatest potential return. In this sense it is both a responsive and responsible budget request.

We have also made a concerted effort to manage these priority activities with greater efficiency and effectiveness. Employment levels at TVA have been cut. Management control systems have been improved. TVA's internal audit and evaluation capability has been strengthened. Managers at all levels know they are personally accountable for achieving specific program goals within budget and on time. The Board of Directors reviews the operating performance of each line organization no less than quarterly. In some areas, such as the electric power system and the nuclear construction program, these reviews occur monthly. TVA is doing its best to provide a benchmark for cost-effective management that compares favorably with any private corporation in the country.

Implementing this performance-based management philosophy is essential if TVA is to fulfill the mandate and expectations of the TVA Act that was enacted nearly 50 years ago--on May 18, 1933. As President Franklin D. Roosevelt said in his message to Congress requesting legislation to create a Tennessee Valley Authority, TVA was to be a "corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." Through the intervening half-century, TVA has never forgotten this original charge from the President of the United States. We believe the programs and activities to be supported by this budget request are faithful to this heritage of "public enterprise that works."

In setting the funding priorities for fiscal year 1984, the TVA Board has been guided by certain principles of action that reflect the basic beliefs embodied in the TVA Act and TVA's unique institutional strengths. These strengths include an interdisciplinary collection of technical and managerial expertise that enables it to address resource development problems in an integrated and comprehensive way; a unique organizational and administrative structure that permits TVA to act in a businesslike manner and in close collaboration with State and local entities and the private sector while preserving its professional and nonpolitical character; and a reputation as a "can do" organization staffed with action-oriented people.

Taken together, the following principles of action provided the basis for the programs and activities that comprise this budget request:

--Resource Conservation and Development. Resource development must be governed by the recognition of the interdependence and physical limits of all natural resources, of the desirability of moving our economy toward greater use of renewable resources, and of the interaction of people with natural resources.

--Economic Development and Environmental Sensitivity. TVA seeks opportunities to demonstrate how environmentally sensitive management of natural resources is an essential component--not an obstacle--to achieving sustained economic growth and jobs in the Valley and the Nation. TVA also believes in the potential of electricity generated from domestic sources--water, coal, and uranium--rather than foreign oil to create jobs and improve the Nation's balance of payments.

--Innovation. TVA seeks opportunities to apply its combination of technical ability and managerial flexibility to pioneer innovative but practical solutions to resource development and conservation problems. This means that TVA uses its institutional strengths to address problems that often pose risky financial or political choices for others.

--Geographic Focus. The Tennessee Valley region is the geographic focus of TVA's activities and continuing attention is paid to the needs and opinions of Valley residents in selecting program activities and in allocating resources to implement them. Special consideration is given to those activities which also benefit the Nation.

--Collaboration. Given TVA's nonpolitical tradition and its multi-State base of operations, problems which cut across Government boundaries and require bringing public and private entities together for joint action are particularly appropriate for TVA to address. In such cases, TVA's role is to assist in identifying basic problems, to demonstrate effective solutions in partnership with others, and then to move on to other issues. Building self-reliance is the cornerstone of TVA's development efforts.

--Results. TVA recognizes the importance of administrative efficiency and of achieving identifiable and positive results as rapidly as possible.

NATURAL RESOURCES

As noted above, unified natural resource management has been a guiding principle during 50 years of TVA dedication to the economic and social advancement of the Tennessee Valley. Fundamental to this approach are two concepts--flexibility and interdependence. In a constantly changing world, natural resource management has become increasingly a joint responsiblity in which TVA, Valley citizens, private institutions, and local, State, and Federal agencies play vital roles. Because natural resource management has regional and national implications, TVA occupies a key position in the Valley with the flexibility essential to promote natural resource management that recognizes the physical limits and interdependence of all natural resources.

The heart of the Valley's natural resource base is one of the world's most highly developed river systems. The Tennessee River and its tributaries--augmented by the companion Cumberland River basin--affect virtually every activity in the region. Having spearheaded development of this river system for 50 years, TVA is mindful of its stewardship responsibilities and the delicate interdependence of uses that must be recognized in resource management activities.

From an operational perspective TVA clearly has unique responsibilities within the region. A vast reservoir system must be managed for firmly established purposes of flood control, navigation, and hydroelectric power production. Other benefits to the region include water supply for municipal and industrial needs, fisheries and wildlife development, recreation, and collateral land resource development. This requires not only the proper maintenance of the dams and reservoirs, but also the coordination of the broad range of TVA activities in the Valley with the legitimate social and economic interests of private and public institutions.

To accomplish these objectives, the TVA natural resources programs bring together a wide range of scientific and technological capability. These include specialists in water system management, water quality, hydraulic and hydrologic engineering, fisheries, flood hazard analysis, forestry, wildlife, historical and cultural resources, environmental and energy education, mapping and remote sensing, air quality, land management and conservation, recreation, and multidisciplinary management.

It has always been TVA's aim to draw on the skills and expertise acquired in responding to management of its own lands and waters to address broader regional resource problems and opportunities. TVA's current natural resources programs address an intentional mixture of resource problems and locales.

In forestry TVA demonstrates, on its own lands, the benefits of proper management practices. At the same time, TVA transfers, on a self-sustaining basis, technological innovations, such as computer-backed management systems, to public and private institutions to boost their capabilities.

TVA's water resources programs are directed not only to the proper quality of surface waters of the Valley but also to increasingly important groundwater resources. In cooperation with State agencies, TVA seeks to overcome a variety of water quality problems such as dissolved oxygen deficiencies and point and nonpoint sources of pollution of streams and reservoirs.

Through comprehensive planning and management of some 300,000 acres of reservoir properties and 170,000 acres of Land Between The Lakes, TVA works to establish a partnership with all institutions involved in the Valley's development.

In recreation, TVA is moving to make its own facilities more self-supporting through fees and cooperative management initiatives while promoting commercial operation of appropriate sites.

In wildlife, in addition to managing its own lands for the greatest productivity in the face of shrinking habitat elsewhere, TVA works to assist State agencies in achieving their own management goals.

In environmental/energy education, TVA continues to assist development of institutional programs through their early stages toward phased self-sustaining operations.

Vital as these programs are individually, they are even more essential to the achievement of TVA's comprehensive natural resource goals. By bringing together varied disciplines, TVA provides opportunities for regional advancement under a system that ensures natural resource conservation and wise use in the face of increasingly heavy and often conflicting demands.

In fiscal 1984, TVA requests $60 million for natural resources programs. Activities include:

--Regional water management focuses on fully realizing the potential of the reservoir system and activities which promote the high water quality necessary for economic growth and the health of our people. TVA will help identify inadequate public and industrial water supply facilities and suggest alternative water sources. A related activity, in cooperation with the States, will be the identification of abandoned toxic waste dumps threatening TVA waters, where assessments will be made to determine impacts on aquatic and human health. TVA will also suggest modification of septic tank systems employed by reservoir shoreline residences where system failures and resulting water contamination are being identified.

--Reservoir releases improvements will continue to focus on enhancing water quality below high dams by increasing the dissolved oxygen content. Hub baffles will be installed at Norris Dam for experimental use during the summer period when dissolved oxygen levels are low; and air blower systems will be tested at both South Holston Dam and Boone Dam.

--Reservoir system operations involves flood control, navigation, and hydroelectric power production. Operation of the system for flood damage prevention avoids average annual flood losses of $140 million. In fiscal year 1983, TVA has already significantly alleviated flooding on the lower Ohio and Mississippi Rivers. In December, TVA flood control measures reduced flood crests at Cairo, Illinois, by over a foot. The navigation channel extends over 650 miles of the Tennessee River and 150 miles of tributary streams and is estimated to save shippers $100 million or more per year. Private industrial development and private and public recreational investment along the waterways are estimated to be more than $4 billion. Hydropower production yielded 12 billion kilowatthours during fiscal 1982 alone, the equivalent of 30 million barrels of oil. Management of the multipurpose reservoirs requires the analysis of rainfall, streamflow, dam safety, and reservoir ecology. TVA is committed to a seven-year program of dam safety analysis in response to the Federal Guidelines for Dam Safety. Plans for all TVA dams will be completed by fiscal year 1988.

--Forest resources activities, by taking advantage of our underutilized woodlands, allows implementation of new supply and demand strategies, creating markets for low grade hardwoods, and upgrading productivity by 40 percent, with the goal of creating

30,000 more jobs. TVA, through State forest agencies, extension, and consulting foresters, will provide private forest owners with computerized programs for planning profitable timber cutting and replanting of harvested acreage.

--Resource management and development support permits rapid access to a broad spectrum of data and "hands-on" assistance in the natural resources field. Updated mapping and regional air, land, and water management planning helps ensure that economic growth is consistent with environmental considerations.

--Land Between The Lakes (LBL), an innovative education, recreational and demonstration facility in western Kentucky and Tennessee, provides millions of Americans coming to that area a recreational learning experience in multipurpose uses of the land. The funds requested will support a number of visitor programs, with no significant investments in new facilities.

Included in the total funding for natural resources is $21 million in capital spending to continue construction on the new main lock at Pickwick Landing Dam. This facility is the only dam on the lower two-thirds of the Tennessee River where a second lock is not available. We expect construction to be 89 percent complete by the end of fiscal year 1984. This project should be completed in August 1986.

ECONOMIC AND COMMUNITY RESOURCES

TVA's economic and community resources effort is built around the premise that TVA can help best in producing self-reliance and strengthening private enterprise by making available its technical expertise to the local private and governmental organizations. Strengthened local economies provide more and better paying private sector jobs. Successful businesses in turn yield higher tax bases for community improvements. TVA, when requested, makes available its data and experienced personnel to show how results can be achieved. TVA helps, but individual communities must be the driving force behind their own economic and community advancements.

TVA's geographic focus is on communities that lack the skills or tools to get the economic development process started on their own. TVA possesses a broad array of technical skills and data about future opportunities as well as insight into the relative strengths and weaknesses of various local economies arising from 50 years of involvement within the Valley. TVA seeks to apply its technical skills in an integrated way and in collaboration with other public and private entities to increase the total impact and accelerate the economic development process. In all of these endeavors, maintaining the quality of the Valley's natural resources is considered a vital component of sustained growth.

TVA does not pretend to have all the skills or all the answers. The key to successful partnership, TVA believes, is continuing dialogue among the parties to avoid duplication of skills and efforts. Examples of this partnership approach include: TVA's successful promotion of agreements with all seven Valley States outlining complementing roles and responsibilities among TVA and the respective State economic and community development organizations; close staff-to-staff working relationships with other Federal programs having similar goals, such as the Small Business Administration; and, most importantly, TVA's relationship with private sector developers, bankers, industry leaders, and others interested in furthering the economic development of the region. This comprehensive network produces public and private involvement and investment in strengthening and developing local economies.

In fiscal 1984, TVA is asking $13.5 million for economic and community resources. Principal activities include:

--Navigation development and engineering assistance provides site engineering, environmental, transportation, and industrial development analyses that enable businesses and local communities to determine the technical, physical, and economic feasibility of development on and off the waterway.

--Economic development and analyses offer reliable economic and demographic data to assist local leaders to determine in a timely fashion the appropriateness of new development decisions. Since more than half of the new employment opportunities in our region result from expansion of existing firms, TVA has developed an industrial retention and expansion program.

--Special opportunities counties and cities concentrate on the region's most economically stagnant areas. Revitalizaton of deteriorated commercial areas, skills training, and the establishment of new businesses are the three goals of this effort.

--Skills development, working with more than 40 regional vocational schools and community colleges and industry, is designed to open training programs specifically geared to production of a more skilled labor force. These workers will be ready for incoming and expanding middle and high technology industries. Last year more than 6,700 Valley residents enrolled in such training and all of those who have completed the program have been placed in jobs.

--Floodplain management provides flood-prone communities with technical and engineering expertise which enables them to initiate flood damage reduction projects which set the stage for the location of economically viable enterprises in less hazardous areas.

AGRICULTURAL RESOURCE DEVELOPMENT

There are more than 100,000 farmers in the Valley, many of whom work small acreages. TVA seeks to increase the prudent use of these agricultural resources. Our attention is focused on these small farms and farmers, many of whom are unable to fully support themselves as full-time farmers.

Valley agriculture does not fit the Nation's farmbelt "mold." Valley farms are small--the average farm size is 131 acres. Cultivated acreage may be no more than 10 to 20 acres in mountainous areas while larger farms are common in the western half of the Valley. Solutions to national agricultural problems do not, therefore, necessarily address problems for Valley farmers. However, Valley agriculture and agriculturally related industries continue to play an extremely important role in the region's economy, employing up to one-third of the work force and generating economic activity of approximately $7 billion.

TVA's role in upgrading agricultural efficiency, productivity, and income has been to introduce new technologies, including conservation, improved fertilizers, high-value crops, farm management systems, and marketing innovations. TVA's agricultural development program is founded on the concept of active cooperation among TVA, State land-grant universities, the USDA Agencies, and Valley farmers with each contributing significant resources and expertise.

TVA pursues a limited number of its program objectives directly through its own staff; most field educational activities are conducted through State land-grant universities and their extension service organizations. University researchers help develop and evaluate alternative solutions to problems. Other State and Federal agencies and local development associations are involved. In this process, TVA provides a regional development orientation, a framework for local institutions and farmers to set and accomplish goals, and modest incentives to encourage change. Projects include computer-programed whole-farm demonstrations, introduction of new crop or livestock enterprises on small farms, market development, productive use of farm wastes, and improving energy-use efficiency on farms.

TVA currently is working with other Federal and State agencies on overcoming a major soil erosion problem in the western part of the Valley region that has resulted from shifting of vast acreages of erodible land from forage crops to soybeans. Goals are to reduce the loss of valuable topsoil, reverse the decline in yields of cash crops, restore and conserve plant nutrients, and increase farm income.

A few hundred farmers are directly involved each year in major result-oriented program activities, such as resource management farms, rapid adjustment farms, and resource management conservation farms. A larger number of farmers and rural residents are involved in other program activities, such as new high-return cash crops.

The $4 million TVA has requested for fiscal 1984 will be used in the introduction of new technologies designed to improve agricultural efficiency and productivity, thereby producing higher farm incomes. Operators of small farms receive advice on how to make the best use of labor-intensive enterprises to increase income. Fertilizer trials and demonstrations, the introduction of high-income crops on small farms, market development to locate buyers for agricultural products, and farmland productivity and conservation efforts will be supported with these funds.

NATIONAL FERTILIZER DEVELOPMENT

TVA's National Fertilizer Development Center is focusing on containment of food costs through the development of efficiently manufactured and higher quality fertilizers, using these new fertilizers more effectively and making this technology available throughout the world. If farmers can produce food and fiber more efficiently, the consumer will benefit.

About 40 percent of all U.S. crop production results from the use of fertilizers. Farmers today are feeding a population 75 percent larger than in the 1930s on slightly fewer acres--and exporting food products worth $40 billion annually. Each farmer produces enough for about 78 people--52 at home and 26 abroad--three times as many as in 1960. U.S. consumers still spend only one-sixth of their disposable income for food, one of the smallest shares in the world.

The National Fertilizer Development Center's mission includes developing better fertilizers, creating more efficient ways to manufacture them, finding ways to use fertilizers more effectively, and making new technology available to the agriculture community. The research and development effort is a collaboration among chemists, engineers, soil scientists, educators, and market specialists.

The work starts with research in laboratories, greenhouses, and field plots. Promising advances are carried to pilot plants for engineering refinements and to produce modest amounts for testing by TVA, State experiment stations, and others across the country. Sometimes this is sufficient to launch a new fertilizer product or a new manufacturing method.

At other times advantages are not clear cut or major problems remain after pilot plant production and limited field testing. In this case TVA may build an intermediate-size prototype production unit that permits engineers to complete process development, provides a better demonstration of potentials to the industry, and supplies enough product for wider introduction. Most output from these demonstration units is sold, at competitive market prices, to private and cooperative members of the fertilizer industry for experimentation in their own operation and introduction to farmers. The material often is blended to produce superior mixed fertilizers. Sale of the fertilizer helps defray expenses of the developmental production program.

TVA staff works closely with university researchers and extension personnel, cooperating manufacturers and distributors, and others in evaluating and introducing new fertilizer technology. Agronomic research projects at Muscle Shoals and State experiment stations help guide the research effort.

The central TVA philosophy--whether development is completed in a pilot plant or in a larger prototype unit--is to achieve industry acceptance as early as possible, conclude the project, and shift attention and resources to other projects.

TVA, by making fertilizer technology and processes available to all manufacturers, has contributed to the survival of the small business segment of the fertilizer industry and to industrywide competition. One result has been that fertilizer prices have not increased as sharply as many other things the farmer buys.

About three-fourths of the 50 million tons of fertilizer used in the U.S. annually is made with the aid of TVA developments.

TVA is asking $41.5 million to continue its national fertilizer development efforts in fiscal 1984. Principal activities are:

--Melt granulation--Fluid materials are used to make granular fertilizers. Once granules are formed, they normally are routed through a fossil-fueled dryer. TVA research will reduce this energy requirement. A basic process (pipe-cross reactor) developed by TVA uses heat generated by the reaction of fertilizer ingredients to do the drying. This technology is rapidly being adopted by the industry. Continued experimental work will improve the process and adapt it to production of numerous grades and types of fertilizers.

--Urea granulation--In recent years urea has supplanted ammonium nitrate as the major solid nitrogen fertilizer in the U.S. and the world. Complementing this trend, TVA has developed a new method for making granular urea. The TVA process conserves energy, reduces environmental problems, and should require less initial investment than conventional processes. We are building a 14-ton-per-hour prototype plant to demonstrate the process. Small-scale experimental work will be continued to further improve the process and to determine its adaptability to production of other fertilizers.

--Phosphate enhancement--Phosphate fertilizers are made from phosphate rock. The amount of phosphate in deposits varies, but the quality of deposits is declining. Beneficiation is the process of removing impurities. Improved beneficiation methods will reduce the amount of phosphate now discarded with wastes and provide techniques suited for use with low-grade rock. TVA's research effort has uncovered several promising, highly efficient flotation agents which may warrant commercialization after further testing.

The proposed research and development effort is aimed at:

--Increasing phosphate recovery from 70 percent to 80 percent during beneficiation and from 95 percent to 99 percent during acid production,

--Increasing uranium recovery by 20 percent, and

--A reduction of 3 million Btu's of energy use per ton of phosphate by increasing the strength of phosphoric acid to 40 percent by use of the hemihydrate process as compared to the 30 percent strength of the conventional dihydrate process.

--Suspension fertilizers--These fertilizers--fluids containing some undissolved solids that are important for crop growth--are the fastest growing segment of the industry. TVA has been the primary force behind their development. Suspensions offer cost savings and convenience, as they are made with lower cost materials than are solution fertilizers. Increasingly, they also are being produced from solid intermediates, which have lower freight rates than fluid materials.

Suspensions generally carry more plant nutrients than solutions--almost as much as granular fertilizers. Also, micronutrient materials and many pesticides can be mixed in and sprayed with the fertilizer in a single application. TVA is actively exploring methods for using new, cheaper, and more convenient materials in production of suspensions.

--Ammonia from coal--This project is demonstrating modern U.S. technology which can provide an alternative to natural gas as a feedstock for making ammonia, the source of nearly all nitrogen in fertilizers.

There are approximately 100 ammonia plants in the U.S. that are potential candidates for conversion from natural gas to coal feedstock. By converting the existing ammonia plants to coal instead of replacing them with new ammonia-from-coal plants, the fertilizer industry could realize a potential saving of about $2.5 billion in capital investment. Utilization of coal instead of natural gas in these ammonia plants would free about 600 billion cubic feet of natural gas per year (about 3 percent of the total U.S. demand) for other purposes. Development of this technology also will contribute to the basic knowledge needed for the U.S. to utilize coal resources in the production of synthetic fuels.

--Hardwood fuels research, for improved technology to convert underused hardwoods into liquid fuels. Using an advanced acid hydrolysis process to convert wood to ethanol, TVA is seeking to increase the present standard alcohol yield from 45-50 gallons per ton of wood to 75 gallons.

POWER PROGRAM

Mr. Chairman, TVA's power program has been a continuing source of interest to this Committee. It has equally been a focus of vigorous management effort at TVA. It is a welcome change, I assure you, that we can report this year on the initial signs of how these management decisions and improvements are benefitting TVA ratepayers.

Although consumer rates in the service area declined for many years as a result of the lowering of average cost of distribution, for the first time in TVA's history, we have been able to reduce wholesale rates.

It now appears that revenue in fiscal year 1983 will exceed our requirements by $125 million, based on rates established last August that went into effect last October. The Board therefore has reduced rates by about 5 percent for the period from April 1 through September 30, 1983. A one-time credit of 10 percent was applied to March bills, reflecting a credit of $44 million from 1982 revenues which were in excess of our needs.

Coming on top of the lowest billing increase TVA has had in 12 years--a 4.4 percent increase effective last October--the overall rate picture in the Tennessee Valley has brightened considerably. The 5 percent reduction for the remainder of fiscal year 1983 means that TVA ratepayers will be paying less than during the comparable months of 1982.

We recognize, of course, that good fortune--especially ample rainfall and lower than predicted levels of interest and inflation--played an important part in this turnaround, just as the record drought of 1980-81 and skyrocketing inflation and interest rates were critical factors in the rate increases during the earlier years. The cost of generating electricity will always be subject to certain natural and economic forces over which TVA managers have little control.

Nonetheless, it is appropriate to mention those management improvements that made it possible for TVA to capitalize fully on the good fortune of the past year. These improvements by TVA management are still taking place and their benefits will be with us for many years, regardless of the impact of external events. These improvements include:

--a "no-excuses" management philosophy that stresses the responsibility of individual managers to achieve explicit operating objectives, coupled with management reporting systems that made it possible to measure performance on a monthly basis;

--prudent investments to upgrade the efficiency of TVA's coal-fired and hydropower generating plants, along with a concerted effort to reduce fuel costs, principally in coal;

--eliminating excess central generating capacity under construction by cancelling four nuclear units and deferring four others, thereby cutting back the nuclear construction program to a level that would support high economic growth in the forecasted range but eliminating capacity in excess of those needs;

--recognizing energy conservation and load management as a relatively inexpensive source of electricity and making the investments that would achieve these savings for individual customers and the power system as a whole; and

--strengthening TVA's internal capability at the corporate level for management improvement and control by creating the Office of Audit and Evaluation that links an improved internal audit capability with a capability for correcting managerial or organizational weaknesses as they are identified.

These management improvements have provided a foundation for a continuing effort by TVA to control expenditures associated with operating the Nation's largest electric system. For example, debt and interest levels, not only for nuclear plants but for all power capital investments, are matters of intense concern. As a consequence of the nuclear deferrals and cancellations as well as other capital investment reductions, TVA's borrowings in fiscal year 1984 are projected to be 50 percent less than in 1981. Electricity consumers in the Valley region will enjoy the benefits of this reduced reliance on debt financing.

TVA will spend about $1 billion on its decreased level of nuclear construction activities in fiscal year 1984, down significantly from a projected $1.4 billion in 1983. Nuclear construction expenditures should also decline rapidly after 1984. The major uncertainty in this area continues to be the nature and costs of safety modifications ("retrofits") to operating nuclear units which may be necessary to meet evolving safety requirements.

Many of TVA's coal-fired units are now fairly old and were technological prototypes when built. They have required investments for replacements and repairs totaling hundreds of millions of dollars since 1979--investments which should decline after 1984. These investments will have continuing payoffs. In a system with increasing nuclear generation capability, many fossil-fired units will be used increasingly for "swing" generation to meet variations in load demand. Other fossil units, in the face of stable or even slowly rising loads, may be placed in a mothball status.

Finally, TVA's financial commitment to wide-ranging conservation, load management, and renewable energy resources programs is undiminished. These programs have already cushioned the price shocks of increasing power costs for many consumers. They will continue to provide significant financial benefits in the future and help TVA avoid construction of high-cost central generating units.

Other cost-saving measures will be pursued as part of TVA's commitment to hold down future rate increases. Operating budgets for labor and materials are not expected to increase in current dollars beyond 1982 levels until fiscal year 1985. This translates into a real cost reduction of at least 12 percent. Wages and salaries in the Office of Power for the first four months of the current fiscal year have declined by 9-1/2 percent. This decline has occurred even though wage and salary levels have risen by more than 6 percent.

At the same time, the uncertainties inherent in operating an electric power system must be recognized. A return to the drought conditions of 1980-81 would significantly increase operating expenses as more costly generation and purchased power would replace lower-cost hydro generation. A major unscheduled outage of central generating capacity is always possible. Power sales in the current fiscal year have continued to lag behind projections due to relatively mild weather and sluggish economic performance of the regional economy. In short, the favorable conditions of the past year will not necessarily continue. Taking these uncertainties into account, our current best estimate is that TVA customers in 1984 will be paying approximately the same for electricity that they were paying in 1983 prior to the one-time credit in March 1983 and the six-month reduction that runs from April through September of this year.

I would also like to report on progress on our atmospheric fluidized bed combustion project at the Shawnee Steam Plant in Paducah, Kentucky. Last month, Duke Power Company of Charlotte, North Carolina, the Commonwealth of Kentucky, and TVA jointly applied to the Electric Power Research Institute for $100 million to support a 160-megawatt jointly designed, built, and operated demonstration plant. The plant is estimated to cost $200 million and other utilities and coal companies will be approached to join with Duke, Kentucky, EPRI, and TVA to finance the remaining costs. TVA is now operating a pilot AFBC plant at our Shawnee Steam Plant and its test results will be used as a basis for the design of the demonstration facility. The AFBC process burns high sulfur coal with limestone, producing a fluidized mass that yields far less pollution than conventional combustion. The entire utility industry is looking for a cleaner way to burn coal and TVA's effort could produce just such a technological breakthrough. If successful, this plant would open up a new technology and make economically available large coal reserves which are currently of little benefit. Many new jobs in the eastern coalfields of the country could result.

CONCLUSION

We want to thank the Subcommittee for its attention to the TVA budget program for fiscal year 1984. We believe it recognizes the requirements of fiscal constraint while at the same time allowing this agency to perform the tasks delegated to it under the TVA Act.

OVERVIEW OF TVA ACTIVITIES

Mr. DEAN. Thank you, Mr. Chairman.

I am pleased to be here today with my fellow board members, S. David Freeman and Richard M. Freeman; our general manager, William F. Willis; and our general counsel, Herbert S. Sanger, Jr.

We are here to review TVA's appropriations request for fiscal year 1984. We plan this year to have much of our testimony presented by TVA's general manager and to use various visual aids to illustrate our remarks.

The slides are to our left here. TVA is requesting a budget program of $122.5 million. This is a slight reduction from fiscal year 1983 appropriations in recognition of the need for budget stringency.

In constant 1980 dollars, the reduction is more pronounced. It is a tight budget that reflects a careful evaluation of program priorities by the TVA board.

We have also made a concerted effort to manage these priority activities with greater efficiency and effectiveness.

EMPLOYMENT

Employment levels at TVA have been cut. Management control systems have been improved. TVA's internal audit and evaluation capability has been strengthened. Managers at all levels know they are personally accountable for achieving specific program goals within budget and on time.

ELECTRIC RATES

Mr. Chairman, before turning to our appropriations testimony, I should report to the committee that the overall picture of electric rates in the valley has brightened considerably.

A one-time credit of 10 percent was applied to March bills, reflecting a credit of $44 million from 1982 revenues. In addition, it now appears that revenue in fiscal year 1983 will exceed our requirements by about $125 million, based on rates that went into effect last fall. The board, therefore, has reduced rates by approximately 5 percent for the period of April 1 through September 30, 1983.

Mr. Chairman, this good news is possible through a combination of good fortune—ample rainfall, lower than predicted levels of interest and inflation, and good management.

While we cannot guarantee that the good fortune will continue in 1984, we do pledge our total commitment to achieve tighter cost controls and increased productivity.

Our best estimate is that TVA customers in 1984 will be paying approximately what they were paying prior to the 6-month reduction that began in April. My prepared testimony contains a more detailed examination of these issues.

Our general manager—William F. Willis—will now present highlights of TVA's appropriated budget request for fiscal year 1984.

NATURAL RESOURCE PROGRAMS

Mr. WILLIS. Mr. Chairman, members of the committee, TVA's natural resource programs have two principal objectives: stewardship of the facilities, lands, and waters under TVA's control, and cooperative management of the natural resources of the Tennessee Valley to achieve their conservation and optimum economic and social development. Many of TVA's innovations in natural resources management are applied nationally.

In fiscal year 1984, TVA requests $35.7 million for natural resources expenses and $24.3 million in capital investment—principally for Pickwick lock.

Maintaining the quality of the valley's water, land, and air resources is a continuing challenge.

The growth of aquatic weeds in the TVA reservoir system, for example, is creating serious operational and health problems. Exotic species entered the reservoir system several years ago and now cover 20,000 acres of water.

Despite increasing control efforts by TVA, the biggest problem is in Guntersville Reservoir in north Alabama. Nearly one-quarter of that reservoir is now choked or threatened with watermilfoil and other weeds.

To compound the problem, last year we discovered hydrilla growing in Guntersville Reservoir. This most noxious of exotic weeds is likely to spread to other reservoirs. Eradication appears impossible, but we must keep these weeds under a realistic level of control, as you see being done here with the experimental application of herbicides by helicopter.

However, there is an urgent need for TVA to develop and implement alternative methods since chemical controls, which are very costly, also present environmental problems. We are presently considering an experiment using the sterile white amur, a large weed-eating fish, as an alternative to chemical treatment. Success here would help solve a growing nationwide problem.

TVA is exploring other ways to improve the reservoirs. As one example, we are experimenting with techniques, such as hub baffles, shown here, to add dissolved oxygen to water released during power production.

Future industrial expansion in areas marked in red is linited due to oxygen deficiency in the reservoirs and is only marginal in the yellow areas. But TVA's innovations have the potential of alleviating the problem, an achievement of both regional and national significance.

Many of TVA's innovations in natural resource management are demonstrated at TVA's Land Between the Lakes.

Our Office of Natural Resources has prepared a brief video report to illustrate how Land Between the Lakes contributes to better resource management in the valley and across the Nation.

[CLERK'S NOTE: At this point, a videotape was shown.]

PICKWICK LANDING LOCK AND DAM

Mr. WILLIS. Mr. Chairman, construction of the new lock at Pickwick Landing Dam will continue in fiscal year 1984.

This slide shows the old lock with a large tow proceeding through it and outlines the location of the new lock.

The next slide shows construction at a critical stage last fall.

Lock operation will be achieved no later than October 1984 with project completion in August 1986. Total construction cost is still projected to be $165 million, the same amount we reported in January 1981.

YELLOW CREEK PORT, MISS.

I thought the committee might be interested in a brief report on planned improvements to the Yellow Creek Port. In these numbered areas, 100 acres of land will be cleared, graded, drainage facilities installed, and grassed. Industrial-type buildings and operating equipment will also be constructed and installed.

This slide shows initial construction work begun last month. We expect to complete most of the improvenents this year. You can see here the proximity and relationship of Pickwick lock and Yellow Creek Port with the Tennessee-Tombigbee Waterway.

Building local self-reliance, especially the ability of local communities to compete successfully in today's rapidly changing economy, is the cornerstone of TVA's program of economic and community development. We help those who help themselves. We also demonstrate economic development strategies that can be applied nationwide.

TVA provides a range of technical assistance that helps energize a community. But the communities themselves are the driving force.

ECONOMIC AND COMMUNITY RESOURCE PROGRAMS

In fiscal year 1984, TVA requests $13.5 million for economic and community resources.

Our program offices are located throughout the valley so that TVA staff and local citizens can work together directly. We have learned there are no pat answers; the needs of each community are different.

A community's economic future will, in large part, depend on the jobs skills of its residents. TVA's wealth of engineering talent makes it an excellent partner to work with State and local officials to provide skilled training that leads to permanent, well-paying jobs, and to demonstrate techniques of skills training that can be used by others. In 1984 our goal is to train 2,000 persons for jobs in high-technology firms.

Richard Morgan, TVA's manager of economic and community development, has prepared a video report on how TVA has been helping communities with survival.

[CLERK'S NOTE: At this point, a videotape was shown.]

NATIONAL FERTILIZER DEVELOPMENT PROGRAM

Mr. WILLIS. Helping farms produce food and fiber more efficiently through better fertilizers at lower cost is the mission of TVA's National Fertilizer Development Center at Muscle Shoals, Ala. This is the Nation's only comprehensive fertilizer research and development program.

In fiscal year 1984, TVA requests $41.5 million for national fertilizer development.

The unique aspect of TVA's fertilizer R&D effort is its success in bringing the results of basic scientific research to the marketplace.

Dr. Billy Bond, TVA's manager of agricultural and chemical development, has provided this video report to illustrate this unique process.

[CLERK'S NOTE: At this point, a videotape was shown.]

Mr. WILLIS. One of our major program goals is to find ways of improving efficiency in the use of nitrogen fertilizers. More nitrogen is used than any other nutrient and it is the most expensive to produce. Yet, only about half the applied nitrogen is used by the crop. The rest is lost, at a cost of hundreds of millions of dollars to farmers.

Particularly important is our effort to find ways to improve nitrogen efficiency in no-till or minimum tillage situations.

We are also trying to harness the valley's vast forest lands by developing the technology for converting wood to fuel alcohol. There is the long-term potential of supplying 20 percent of the region's gasoline needs using hardwoods that are now wasted. Other regions with excess hardwoods would also benefit.

AGRICULTURAL RESOURCE DEVELOPMENT PROGRAM

TVA's agricultural resource development program has as its main objective making the region's small farms more productive and profitable. These programs are carefully planned to avoid overlap with the USDA and other agencies. In fiscal year 1984 we are requesting $4 million for this program.

Sometimes old problems come back, as this recent picture dramatizes.

In 1979, we joined with local and State organizations and all of the USDA agencies in a cooperative effort to stop the extremely serious erosion in west Tennessee. TVA's special contribution is in helping farmers manage their farms productively to maintain sufficient income while the soil is being stabilized.

This past January, we joined with similar groups in north Alabama to begin a program there. It is called Operation SOIL, save our important land.

Mr. Chairman, I would like to conclude this overview with a personal word. What cannot be communicated with slides or video tape are TVA's unique institutional strengths, an interdisciplinary collection of technical and managerial expertise that helps TVA to approach resource development problems in an integrated way, an administrative structure that permits TVA to act in a businesslike fashion, and, above all, a can-do organization staffed with action-oriented people.

These strengths set TVA apart at the time of its creation a half-century ago. We believe these strengths endure today.

Thank you, Mr. Chairman.

Mr. DEAN. Mr. Chairman, we want to thank the subcommittee for its attention to these highlights of the TVA's budget program for fiscal year 1984.

If you or your colleagues have questions, we would be pleased to attempt to answer them.

Chairman HATFIELD. Thank you, very much, Mr. Dean, and Mr. Willis.

Mr. Freeman, do you have any further words?

Mr. RICHARD FREEMAN. No.

Mr. DAVID FREEMAN. I would like to say this in behalf of TVA, to thank this committee for its steadfastness and support over this half century.

Administrations have come and gone, but this committee and the senior members on it have probably had more experience in observing TVA and in supporting it than any group in the country.

On our 50th birthday, I want to acknowledge a great debt that we have to this committee and hope that you will stick with us at least 50 more.

Chairman HATFIELD. Thank you. I cannot promise that. [Laughter.]

But I would like to stay with you at least through the celebration year. [Laughter.]

Maybe we would be able to get down to Tennessee and help you celebrate. This was an excellent presentation.

I happen to be a visual learner and I, therefore, appreciate very much both the work that you have done with the video tape as well as your slides.

Let me go into some of the statistical data at this time, if I could.

PROGRAM LEVEL FOR 1983

In the 1984 budget justification—correct me, if I am in error—but I have listed here in my notes $257,913,000 is available for expenditure in 1983; in addition, the emergency jobs legislation, which was recently passed, appropriated another $40 million for TVA programs and activities. So, a total amount of $297,913,000 has been made available to TVA by the Congress for fiscal year 1983.

If you count the deferral of $47,271,000 proposed by the President, we have then a remaining figure of $250,642,000 that is currently available for obligation and expenditure on TVA programs and activities.

Are those figures correct, Mr. Willis, as far as your understanding of the figures for 1983?

Mr. WILLIS. Yes, these agree with my figures.

Chairman HATFIELD. If those figures that I have just outlined are accurate, and I believe they are, it would indicate you have approximately $131 million over the program envisioned in the 1983 budget.

My question first is, do you feel that you can wisely, efficiently use such a large increase for the upcoming year?

Mr. WILLIS. We actually will be looking at $122 million new dollars for TVA in 1984, plus the $47 million deferral. The jobs bill of $40 million will be added to that. Yes, sir. We have an effective program outlined for that.

Chairman HATFIELD. Let me rephrase my question. What I have done is outlined a series of figures relating to the fiscal year 1983 budget, not comparing it to the 1984 request. I am looking at the figures that you had originally estimated to be your requirements for fiscal year 1983 and what you actually have available for obligation in fiscal year 1983. My computation indicates that you have, in effect, $131.2 million over the amount that you originally had estimated would be your requirement for fiscal year 1983.

Mr. DEAN. That includes some money that is earmarked for some of these projects such as a coal gasification plant, I believe, Mr. Chairman.

Mr. WILLIS. That is correct.

Mr. DAVID FREEMAN. And Columbia Dam.

ANTICIPATED CARRYOVER BALANCES

Chairman HATFIELD. Let me carry it a little bit further to try to get some more of the particulars of this. In 1982, we had a figure of $128 million brought forward from prior years. That was to apply to fiscal 1982. We had $81.5 million brought forward to apply in fiscal year 1983 from previous fiscal years.

I suppose again I would have to come back to my basic question. That is, in light of the large increase in budget authority available for fiscal 1983, what do you anticipate, at this time, would be a carryover into fiscal year 1984? I am approaching the problem now from a little different angle.

Mr. DEAN. I will defer to our budget people, but I would say as a general statement, Senator, that there would be little carried forward that was not specifically earmarked for a specific project. We have two kinds of money at TVA as you well know.

A good example is the coal gasification project. Would staff want to comment further on that?

Mr. LONG. My name is Bruce Long, chief of TVA's budget staff. At this point, we do not anticipate carrying such sums into 1984. With respect to the additional money provided in the jobs bill, we anticipate there might be a small amount carried into 1984; as for other projects, if the Columbia and the coal gasification projects progress, much of that money would be spent in 1983. So, we would have less carried forward into 1984.

Chairman HATFIELD. Could you give us a breakdown on what you do actually anticipate on a carry forward for 1984?

Mr. DEAN. Yes, sir. We will submit that for the record.

[The information follows:]

ESTIMATE OF UNOBLIGATED BALANCE IN FISCAL YEAR 1984

At the April 12 hearing it was anticipated that the coal gasification project at Murphy Hill, Ala., would continue on its then current schedule. On April 13, the Synthetic Fuels Corp. shifted the Murphy Hill project to the SFC's third solicitation of proposals. As a result, we now estimate that $40 to $50 million will be carried forward into 1984 for the coal gasification project and other projects.

Chairman HATFIELD. I accept your testimony as you best understand the situation at the moment, but let me go back and recall your testimony last year. You gave us a figure of $63.7 million as an anticipated carryover into 1983 and the justification material shows it turned out to be $81.5 million.

What was it? It is more than earmarking involved it seems to me that would account for this higher amount than you could predict at that time and especially in light of the previous carryover from 1982 into 1983 and from 1981 into 1982.

Mr. WILLIS. Mr. Chairman, the preponderance of this has been brought about by the carry forward of the coal gasification project over about a 3-year period. We would be glad to illustrate those numbers to show that.

Mr. DEAN. We will furnish you a detailed breakdown, Senator.

[The information follows:]

Unobligated balances for coal gasification project

[In millions of dollars]

Fiscal year	*Balance to be carried forward*
1981 actual	100.3
1982 actual	62.8
1983 estimate	35.0

Chairman HATFIELD. Perhaps it would be helpful if we could get a breakdown of the carryovers in the last, say 5, 6 years as a trend line.

Mr. DEAN. We will certainly do that. But it is a fact that when you get allocations for specific projects—and the coal gasification project is the biggest—sometimes the projects don't go forward as fast as we had anticipated. Therefore, there is carryover.

Mr. DAVID FREEMAN. Mr. Chairman.

Chairman HATFIELD. By projects as well?

Mr. DEAN. Yes, sir.

Mr. DAVID FREEMAN. Without unduly prolonging this, I would like to stress that the carryover funds are principally for two projects that we have been directed to do by the Congress, as we read the committee reports. The sense of the Congress is to proceed with and to keep that money for those projects. We have been trying to be as prudent as we can. On the Columbia Dam there has been a problem with a mussel. We have not spent the money willy-nilly. So, it hasn't been spent as rapidly as perhaps it might have been. The same is true for the coal gasification project. Project funds have not been obligated faster than prudent judgment determined. I think the record showed that in our appropriations, generally where we have some discretion and where we make estimates, that there are no significant carryover funds. So the carryover issue is, by and large, a function of the coal gasification plant and Columbia Dam, and we feel an obligation to carry the money over specifically for those projects.

We feel that we have been fairly prudent in doing that.

Chairman HATFIELD. I would agree. I am not really delving into this as a matter necessarily of criticism. I am just trying to get a better comprehension why you can't touch those funds when they could be used elsewhere. I remember last year, for instance, when we were taking up your budget we proposed a $10 million general reduction that we thought could be accomplished through unobligated balances, anticipated savings, and so forth. There was a very strong protest from the TVA world that that $10 million would just put you under inordinate difficulty, that it would not be—you could not cope with it.

At the same time, when I see these figures of carryovers, do you think that $10 million reduction we proposed was all that negative?

Mr. DAVID FREEMAN. Mr. Chairman, if I might say so, of the $10 million reduction, if we had the discretion to include the projects for which the money was earmarked, perhaps we could live with it, but we feel an obligation from the direction of the Congress for the carryover funds to be continued for the Columbia Dam and the coal gasification project—a $10 million cut in our discretionary budget would have been a very devastating blow.

Chairman HATFIELD. That is why it would be very important to be able to break out of that $81.5 million just precisely what moneys were earmarked for those projects that you speak of, because according to my understanding, I do not believe the total amount of that carryover could be attributed to those two projects.

Mr. DAVID FREEMAN. We have a burden of supplying that for the record. We appreciate the questions. We will do that.

[The information follows:]

UNOBLIGATED BALANCE BY FISCAL YEAR

[In millions of dollars]

	End-of-year balance				
	1978	1979	1980	1981	1982
Tellico Dam	4.1	1.3	13.3	5.3	1.7
Columbia Dam		17.1	19.0	16.7	10.2
Coal gasification			54.6	100.3	62.8
Other capital investment	.6	5.1	.8	4.5	6.2
Expenses	7.3	1.7	-.3	2.0	.6
Total	12.0	25.2	87.4	128.8	81.5

Chairman HATFIELD. If that total of $81.5 million or the previous year's $123 million, whatever it was, carryover into 1982 were on earmarked projects, that is one thing. But I believe that the data may well show that at least a portion of that $81.5 million carried into 1983 was over and above the coal gasification and the Columbia Dam projects.

Mr. DEAN. I would like to make a general statement, Mr. Chairman. The last thing that I want is to catch anybody at TVA saying that, "The end of the year is coming, so spend the money." I am sure you certainly agree with that philosophy. So there may also be a little carryover in order to avoid yearend spending. But we don't get in a rush to spend unwisely.

Chairman HATFIELD. I understand, but $81.5 million is more than a little carryover—it's $20 million more than what you testified to last year.

I happen to sit on the Rules Committee. As you may know, every committee of the Congress has to go before the Rules Committee and get their budgets approved. The Appropriations Committee has made some rather significant reductions in our budget requests and, in addition to that, each year that we have made that request with the Rules Committee we have also had unobligated funds that we have had as a carryover because we have had prudent administration and management on this committee.

We end up getting penalized by the Rules Committee for being prudent, because they say, "You have all those unobligated funds from last year, therefore you have less requirement for next year." Whereas the Judiciary Committee goes in, asks for a 20-percent increase, whatever it is, they have spent all their money. They want more money—and they get it. So, I am not trying to put TVA into that similar situation, believe me, I understand.

Mr. DEAN. We will get the figures you want, Senator.

Chairman HATFIELD. I would like to be able to get that. Just a matter of reviewing that $10 million proposed reduction we had last year and the feeling expressed then was so negative toward that.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

I have a number of other questions, gentlemen, for the record that I will submit to you for response.

[The questions and answers follow:]

1983 PROGRAM

Question. The President's 1983 budget request for the Tennessee Valley Authority was $119.5 million. What level of funding was provided through the continuing resolution for TVA programs and activities? Could you provide for the record a breakout of how the additional amount over and above the budget request was allocated? Also include a list of each activity or effort which was not a budgeted item yet received some level of funding.

Answer. Under the continuing resolution, $176.4 million was made available to the TVA for fiscal year 1983. Of that amount, approximately $47.3 million has been deferred until the end of fiscal year 1983 and will be used to fund TVA's fiscal year 1984 activities. The following table represents the allocation of the remaining additional appropriated funds provided by the continuing resolution. Primary direction for the allocation came from the House subcommittee report. The only project not previously budgeted was the economic development effort at Yellow Creek Port.

APPLICATION OF APPROPRIATIONS

[In thousands of dollars]

	1983 President's budget	1983 continuing resolution	Change
OPERATIONS			
Natural resources:			
Water resources	21,478	21,478	
Land and forest resources	3,978	3,978	
Resource management	2,619	2,619	
Land Between the Lakes	6,235	6,235	
Economic and community resources:			
Economic resources	8,100	8,850	+750
Community resources	4,600	4,600	
Agricultural resources development	3,700	4,950	+1,250
National fertilizer development	31,403	32,586	+1,183
National energy demonstrations			
General services	640	640	
Total operations	82,753	85,936	+3,183
CAPITAL INVESTMENT			
Natural resources:			
Water resources:			
Columbia Dam and Reservoir	2,000	2,000	
New lock at Pickwick Landing Dam	22,970	22,970	
Additions and improvements	2,836	2,836	
Land and forest resources: Recreation facilities	100	100	
Land Between the Lakes	215	215	
Economic and community resources:			
Economic resources		4,200	+4,200
Community resources: Local flood damage prevention facilities	700	700	
National fertilizer development:			
Chemical facilities	5,215	5,215	
Ammonia from coal facilities	183	183	
General facilities	2,518	4,807	[1] +2,289
Total capital investment	36,737	43,226	6,489
Total appropriations	119,490	129,162	9,672

[1] Since these figures were published in the Budget Appendix of the United States, the TVA board has allocated these funds to energy conservation projects on all TVA nonpower facilities and other nonpower programs.

UNOBLIGATED CARRYOVER BALANCES

Question. According to the data presented in TVA's 1984 budget justification, $257,913,000 is available for expenditure in 1983. In addition, the emergency jobs legislation appropriated an additional $40 million for TVA programs and activities. So, total resources of $297,913,000 have been made available to TVA in 1983 by the Congress. When adjusted for the $47,271,000 deferral proposed by the President, $250,642,000 is currently available for obligation and expenditure on TVA programs and activities. This is $131,152,000 over the program envisioned in the 1983 budget. Do you realistically believe you can wisely and efficiently use such a large increase?

Answer. Yes, we can effectively use this amount. The $131 million is comprised of $40 million recently appropriated by the jobs bill and $91 million from ongoing TVA projects and programs.

With respect to the jobs bill money, we have identified the specific projects for which the funds will be spent. All that remains is hiring the personnel to do the work and we plan to have this essentially completed within 90 days.

Almost $10 million of the $91 million results from the continuing resolution which provided $129,162,000 rather than the $119,490,000 in the 1983 TVA request. The TVA board has allocated this money to specific projects and programs, and implementation is well underway.

As the following table shows, the remaining $81.5 million results from carryforward from 1982. The bulk of this—$80.9 million—can be attributed to capital projects, principally Columbia Dam and the coal gasification project at Murphy Hill, Ala.

Sources of unobligated amounts

[In millions of dollars]

	1982 carried forward to 1983
Tellico Dam	$1.7
Columbia Dam	10.2
Coal gasification	62.8
Other capital investments	6.2
Other expenses	0.6
Total	81.5

The Congress has very wisely, we believe, consistently appropriated TVA funds on a no-year limitation basis. This recognizes the problems inherent in estimating expenditures for the construction of large capital projects. Its safeguard against unwise year-end spending applies to expense-type programs as well.

With respect to Columbia Dam, the delays in spending amounts provided for the project since 1979 have all been associated with the required protection of an endangered species of mussels and water quality-related proceedings. Two formal deferrals in 1979 and 1980 serve as evidence of the problem associated with spending on the project. While these problems are being resolved, TVA has endeavored to be conservative in spending this money until such time as the final status of this project is determined. As a result of this continuing uncertainty in 1982, the $10 million of funds associated with the Columbia Dam were carried forward to 1983.

Congressional intent to insure that appropriated funds will be available for Columbia Dam, if and when these and any other legal questions are resolved, is evidenced by the language of support for the project in Senate Committee on Appropriations reports for fiscal years 1978–82.

Further evidence is provided by the special Columbia Dam appropriation account established by the Congress for fiscal year 1981.

The coal gasification project, while quite different in nature, presents similar issues for TVA with respect to unobligated balances.

This project was initiated with appropriations in 1980 and 1981 totaling $210 million. These funds were appropriated with the intent that they be the first stage of an appropriations-financed project which was estimated to require in excess of $1 billion. However, a rescission of $85 million in TVA's appropriated funds, which Congress approved in 1981, reflected a new congressionally established direction for the project. Congress directed TVA to use available funds budgeted for the project (approximately $125 million) to bring the project to the point where a consortium of private investors, with support from the Synthetic Fuels Corp., could assume responsibility for financing, construction, and operation of the project. The appropriations investment in the project is required to be repaid to the Treasury over the project life.

Consortium members representing 50 percent of the required equity have been identified as of this date. The likelihood of attracting additional equity partners is not good in view of the current uncertainty over future oil prices. Negotiations with the Synthetic Fuels Corp. are continuing. During this period, there has been considerable progress in site preparation, preliminary design, and process selection.

In these circumstances, prudent management and sensitivity to congressional intent that this project be turned over to the private sector in an orderly manner has dictated careful spending of these funds at a slower rate than originally expected and has resulted in $63 million carried forward from 1982 to 1983.

It should be pointed out that in both of these cases the funds have been carried forward to be applied to the projects originating the unobligated amounts. The balances have not been used as a source of funds for other projects or programs.

TVA is proud of its record of carefully and efficiently managing projects to their successful completion. We believe our management of these two particular projects is consistent with that tradition and in accordance with congressional intent.

1983 CARRYOVER UNOBLIGATED BALANCES

Question. Unobligated amounts of $128.8 million and $81.5 million have been brought forward from prior years into fiscal years 1982 and 1983 respectively. In light of the large increase in budget authority available for fiscal year 1983, what level of unobligated balances do you anticipate will carry forward into 1984?

Answer. At present we estimate $90 to $100 million to be carried forward into 1984. This largely results from unobligated funds earmarked for the coal gasification project at Murphy Hill, Ala., which, as you may know, was moved to the third solicitation by the Synthetic Fuels Corp. in the latest review held subsequent to our appropriations hearings. Added to that are unobligated funds resulting from the uncertainties still surrounding the Columbia Dam and Reservoir and the administration's proposed deferral of $47 million to offset new appropriation requirements in fiscal year 1984.

Question. In testimony last year you stated that, "TVA now plans to carry over an estimated $63.7 million into fiscal year 1983." How do you account for the $81.5 million unobligated balance brought forward into 1983 that is shown in 1984 budget data?

Answer. I would like to insert the following table into the record that will detail where the difference comes from:

[In millions of dollars]

	Estimate in testimony	Actual	Difference
Coal gasification project	56.5	62.8	+6.3
Tellico Dam and Reservoir		1.7	+1.7
Columbia Dam and Reservoir	6.0	10.2	+4.2
Other capital projects	1.2	6.2	+5.0
Expenses		0.6	+0.6
Total	63.7	81.5	+17.8

UNOBLIGATED BALANCE

Question. What specific project(s) is the additional $5 million (other capital projects) to be spent on?

Answer. The following table gives a breakdown of the estimated versus actual 1982 carryforward for other capital projects:

OTHER CAPITAL PROJECTS

[In millions of dollars]

	Estimate in testimony	Actual	Difference
Pickwick lock		2.0	+2.0
Bear Creek		0.2	+0.2
LBL facilities		.1	+.1
Chemical facilities		.5	+.5
Ammonia from coal		.2	+.2
Additions and improvements	0.3	1.1	+.8
General facilities	.9	2.1	+1.2
Total	1.2	6.2	+5.0

GENERAL REDUCTION RECOMMENDED FOR 1983

Question. In action on the fiscal year 1983 appropriations bill, we proposed $10 million general reduction for anticipated savings and unobligated balances, and as I recall there was much doom and gloom spread around these halls as to the impact on TVA's programs. In light of this additional $17.8 million in unobligated balances for 1982, do you believe that such adverse predictions were warranted?

Answer. From the table you will note that a total of $17.2 million resulted from funds allocated to capital projects. Only $0.6 million came from TVA's ongoing resource management and development programs. If a $10 million reduction had been made in TVA's appropriation, one of two things would have been necessary. In theory, the reduction could have been taken in the capital projects where the underrun occurred. We do not understand that such actions would reflect the guidance from the committees. In any case, a new equivalent appropriation at some later date would have been necessary to complete the projects. Or the reduction could have been taken in operating programs, which would have had a devastating effect on those resource conservation and development efforts.

Question. In retrospect, what impact would the $10 million reduction have had on your 1983 program?

Answer. If the $10 million reduction to the 1983 request for TVA ($119.5 million) had been sustained, thereby reducing 1983 funding to $109.5 million, and if TVA protected capital projects, it would have been necessary to prorate the reduction over the resource development, community, and agricultural programs. Since these are already operating under constrained funding, the negative impacts of such a reduction would have been significant.

POSSIBLE 1984 GENERAL REDUCTION

Question. Based on the 1984 programs as you see it today, what impact would a similar $10 million, or even $20 million, reduction have on your activities?

Answer. Again this year as last, our budget request is almost $8 million below our 1983 appropriation. A $10 or $20 million reduction in fiscal year 1984, unless deducted from the balances available for capital projects, would severely curtail TVA's basic resource management and development programs, forcing layoffs and abandonment of many ongoing TVA activities. We do not understand that we are at liberty to make such a reduction from capital projects and, in any event, a new equivalent appropriation at some later date would be required to complete them.

FIVE-YEAR RECORD OF UNOBLIGATED BALANCE

Question. Finally, we would like you to provide for the record a tabulation for the last 5 years of record which shows the estimated level of unobligated balances as presented in the budget document and the actual level at the end of the fiscal year.

Answer. We would like to provide the following table for the record:

UNOBLIGATED BALANCE

Fiscal year	President's budget estimate	Actual
1978		$12.0
1979	$15.0	25.2
1980		87.4
1981	15.8	128.8
1982		81.5

The amount estimated in the President's budget for fiscal years 1979 and 1981 are associated with deferrals of Columbia Dam moneys. The large increases in actual balances as compared to the estimates result from the appropriation in 1980 and 1981 of $210 million for the coal gasification project. These large appropriations were added by the Congress and were, therefore, not anticipated when the budget requests were submitted.

As indicated in response to a previous question, there are extraordinary circumstances surrounding each of these projects.

COLUMBIA DAM AND RESERVOIR

Question. The 1983 budget request included $2 million to continue conservation, cultural, wildlife, and road and bridge work associated with the Columbia Dam project. Yet the continuing resolution provided a much larger amount of $12,159,000. How does TVA plan to spend the additional $10,159,000 not programed for the budget year?

Answer. Of the $12,159,000 currently planned for 1983, $10,159,000 results from carryforward from previous appropriations. The $2 million requested was the additional funding required, not an estimate of total obligations for the year. TVA has budgeted the $12,159,000 for fiscal year 1983 for road and bridge construction and continuation of the mussel conservation program; water quality studies; cultural, historical, and archaeological investigations; and other planning activities.

Question. How much does TVA actually expect to spend in 1984?

Answer. If likely success is achieved with the mussel conservation program in 1983, and if funding is provided, major construction could resume in the fall. Because of uncertainties, we have not requested any funds in fiscal year 1984; however, an additional $28 million would be required in 1984 if TVA became able to continue construction of the Columbia Dam and Reservoir.

COLUMBIA

Question. At the current rate of work on Columbia, what would TVA actually expend on the project in 1984?

Answer. We would not expect work to continue at the current rate on Columbia in fiscal year 1984. A milestone should be reached later this year when a determination will be made as to whether the mussel conservation program is likely to succeed.

If the U.S. Fish and Wildlife Service concludes that the mussel conservation program shows likely success and Congress provides funding that indicates an intention to fund completion of the project, TVA would be in a position to accelerate road relocation construction and land acquisition and continue the other cultural, water quality, and mussel conservation activities in fiscal year 1984. The $28 million additional funding was based on this assumption.

If likely success of the mussel conservation program is not proven to the satisfaction of the U.S. Fish and Wildlife Service or Congress fails to provide additional funding that indicates an intention to fund completion of the project, no increase in project activity would be possible. Indeed, ongoing construction—which now consists of four road and bridge projects—would be phased out as these projects are completed. The mussel conservation studies would be continued as appropriate and the water quality studies, cultural investigations, and other planning activities would continue at a reduced level. Under these assumptions, an estimated $4 million carryover would result from fiscal year 1983 and would be sufficient for fiscal year 1984.

Question. What portion of the $12,159,000 will not be obligated in 1983?

Answer. Uncertainties surrounding this project could change our plans and result in some of these funds remaining unobligated at the end of the fiscal year. However, at this time TVA expects to obligate the total funds estimated for 1983.

Question. What level of funding was unobligated and carried forward into fiscal year 1983?

Answer. The amount of $10,159,000 was carried forward into fiscal year 1983.

MUSSEL CONSERVATION PROGRAM

Question. Has there been any change in the mussel conservation program from that presented last year? Do you still expect to prove success by the spring of 1985?

Answer. We have made progress in the mussel conservation program. TVA completed transplanting 4,000 mussels to four streams in the valley in November 1982. We expect to show to the Fish and Wildlife Service likely success in the program this year and proven success in 1985.

Question. Does the Fish and Wildlife Service approve of the manner in which TVA is proceeding?

Answer. An interagency committee composed of representatives from the Fish and Wildlife Service, TVA, Environmental Protection Agency, and the States of Tennessee, Virginia, and Alabama meet on a regular basis to coordinate the program. We are presently conducting various activities under the program that have been approved by the committee.

ANNUAL OBLIGATIONS AND EXPENDITURES

Question. Provide for the record a tabulation whichtracks on an annual basis past appropriations, obligations, and expenditures for the Columbia Dam project.

Answer. As you know, the Duck River project was planned, evaluated, and proposed to Congress as an integrated project consisting of two dams and reservoirs—Normandy and Columbia. Until 1977, the project was approved and funded on this basis. The following table reflects funding specifically for the Columbia Dam and Reservoir since 1977:

DUCK RIVER PROJECT

[In millions of dollars]

Fiscal year	Appropriations	Actual obligations	Actual expenditures
1969	0.4	0.1	0.1
1970	1.3		0.2
1971	3.3	0.3	0.3
1972	7.5	1.4	1.1
1973	5.0	10.7	9.0
1974		9.9	11.4
1975	13.0	12.4	11.5
1976	16.8	16.5	15.3
19TQ	2.8	4.3	2.9
1977	20.0	10.7	11.5
1978	20.0		
	[1] −9.2	14.9	11.3
1979	26.0		
	[2] −15.0	8.9	10.3
1980	[3] 15.0		
	[4] 8.5		
	[2] −17.0	6.6	10.6
1981	[3] 17.0		
	[5] 18.0		
	[6] −17.0		
	[2] −15.8		
	[7] 15.8	3.3	4.3
1982		6.5	6.5
1983	2.0	(est.) [8] 12.2	(est.) 12.1

[1] Application of general slippage as directed by Congress.

[2] Funds deferred in fiscal year.

[3] Funds available from previous fiscal year's deferral.

[4] Additional appropriated funds for Columbia project.

[5] Congress appropriated new funds for Columbia project.

[6] Congress reprogramed use of deferred funds.

[7] Funds released by administration.

[8] Included in President's budget submitted to Congress in February 1982.

COLUMBIA DAM AND RESERVOIR

Question. Also provide for the record a tabulation which displays the future of the Columbia Dam project, on an annual basis, in terms of appropriations, obligations, and expenditures until completion.

Answer. Assuming we are able to show likely success with the mussel conservation program this year and Congress appropriates additional funds, the following annual appropriations would allow TVA to complete the project expeditiously based on the following schedule:

Construction restart, October 1983; third stage diversion, January 1985; reservoir impoundment, January 1987; and project completion, August 1987.

Fiscal year	Expenditures	Obligations
1984	$25,200,000	$29,000,000
1985	45,000,000	45,000,000
1986	47,000,000	45,000,000
1987	18,239,000	16,205,000

MISCELLANEOUS REVENUES

Question. Describe briefly those programs and activities (excluding the power program) that produce revenues and proceeds for TVA. Provide a comparison over the past 5 years of how the actual realized revenues compared to the present level in each fiscal year budget. (The analysis should be program specific and show any large amount of unanticipated revenues.)

Answer. Revenues and proceeds are generated in five program areas and one category other than the power program. They are as follows:

(1) The reservoir system operations program includes TVA's responsibility for maintaining an integrated system of 38 multipurpose dams, reservoirs, and associated lands primarily for flood control, navigation, and hydroelectric power production. Nonpower proceeds are generated in this program from campground fees, timber harvests, and agricultural land leases.

(2) The Land Between the Lakes program incorporates TVA's demonstration of a living laboratory for the study of cultural, conservation, and resource use principles as well as outdoor recreational activities. Nonpower proceeds are generated from campground fees and timber sales.

(3) The agricultural resources development program contains TVA's efforts for upgrading agricultural efficiency, productivity, and income by introducing new technologies, including conservation, improved fertilizers, high-value crops, farm management systems, and marketing innovations. Nonpower proceeds are generated from the sale of experimental fertilizers to carry out program objectives.

(4) The National Fertilizer Development Center's introduction program is the only national program for developing improved fertilizers and processes in prototype units, and expediting the acceptance of that new technology so that the benefits of research and development are quickly transferred into the Nation's economy. Revenues are generated from the sale of experimental fertilizers to meet program objectives.

(5) The general services program includes general facilities of all TVA programs, maintenance of bridges across TVA dams, other expenses, reimbursable services, and administrative and general expenses. Nonpower proceeds are generated as TVA performs reimbursable services for other Federal, State, and local governments, agencies, and foreign governments.

(6) The sale of retired plant equipment and miscellaneous receipts is not a program, but rather a category used to identify the amount of proceeds realized from the disposal of wornout and defective equipment.

A table comparing actual and estimated revenues from nonpower proceeds is provided for the record.

COMPARISON OF ACTUAL AND ESTIMATED REVENUES FROM
NONPOWER PROCEEDS BY FISCAL YEAR
April 1983
(In thousands of dollars)

	1978		1979		1980		1981		1982	
	Pres. Budget Estimate	Actual Rcpts.	Pres. Budget Estimate	Actual Rcpts.	Pres. Budget Estimate	Actual Rcpts.	Pres. Budget Estimate	Actual Rcpts.	Pres. Budget Estimate	Actual Rcpts.
NATURAL RESOURCES										
Water resources										
Reservoir system operations	479	537	405	559	308	417	415	447	431	737[a]
Land Between The Lakes										
LBL operations.............	400	496	500	584	487	744[a]	529	738[a]	663	822[a]
AGRICULTURAL RESOURCES DEVELOPMENT.................	327	201[b]	550	30[b]	503	18[b]	226	44[b]	74	10[b]
NATIONAL FERTILIZER DEVELOPMENT.................	20,785	20,679	26,517	21,906	27,639	27,224	24,442	33,744[c]	42,723	32,762[d]
GENERAL SERVICES										
Reimbursable services[e].......	18,873	27,334	25,614	20,918	60,833	29,905	30,599	4,314	33,581	22,141
Sale of retired plant and miscellaneous receipts......	1,132	595	847	461	367	846	369	2,620[f]	633	1,333[f]
Total..................	40,864	49,247	53,586	43,997	89,770	58,308	56,211	39,287	77,472	56,472

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a. Increase in timber sales.
b. Discontinued use of custom-blended fertilizers in ARD program.
c. More fertilizers distributed to field programs than anticipated.
d. Less fertilizers distributed to field programs than anticipated.
e. Estimates for reimbursable services are made two years in advance of the time they are requested. Generally, as the budget year approaches, the requesting agencies revise their estimates significantly.
f. Sale of phosphate land.

TELLICO DAM LAND SALE

Question. TVA purchased 38,000 acres of prime farmland for construction of the Tellico Dam. That land cost the Federal Government approximately $4.7 million. In November of last year, 11,102 acres were sold for $13.8 million—over $9 million more than TVA paid for the property. Do you believe it is wise public policy for an agency which acquires land under eminent domain to then resell that land for profit?

Answer. The Tellico project was presented to the Congress by TVA and approved by this committee and the Congress before the present members of the board took office. Your question raises a policy question which the present board members have never considered and, in the case of Tellico, was settled by the legislation directing TVA to complete the project as planned, notwithstanding any other provision of law. We are not planning any projects which would raise a similar issue.

Question. What has TVA done with the $9 million profit it made from the land sale? Provide a detailed list for the record of how the funds were allocated, if not returned to the Treasury.

Answer. TVA acquired some 38,000 acres of land for the Tellico project, of which some 16,000 acres were below the maximum reservoir pool. The acquisition included 8,447 acres of prime farmland, 6,500 of which were below maximum pool. Land acquisition costs for the project were around $25 million.

In 1982 TVA transferred approximately 10,300 acres of land (together with easements and an option on an additional 520 acres) to the Tellico Reservoir Development Agency (TRDA), a public agency created by the Tennessee legislature. These transferred lands (which include public-use areas and the Tellico Parkway, a limited-access highway serving most of the project area) had been designated in project plans for industrial, residential, and commercial recreational development. Under the provisions of TRDA's agreement with TVA, TRDA will provide for the comprehensive and unified development of this land pursuant to development standards established by TVA.

Some of the transferred land was purchased as much as 15 years ago. Land values have increased during the long period between acquisition and transfer, not only because land values during this period increased at historic levels, but also because of the substantial public investment in the reservoir, which has significantly increased the value of the adjoining lands. The lands would not have their current market value in the absence of the project. Of course, during this period former landowners had available to them for investment, money paid to them for land, and this was also a period in which interest rates on investments were at historic levels. At the time of the transfer the land was appraised at $13.7 million. Under the agreement TVA will receive 50 percent of the unimproved value of each parcel of land when it is sold by TRDA at its then-current market appraised value. This reflects the cooperative nature of the project and, consistent with the basis on which the project was funded, permits the Federal Government to share in the enhanced value of this land as development occurs.

MISCELLANEOUS REVENUES

Question. The response does not mention any disposition of revenues from the transfer of the land to TRDA. If the Federal Government is sharing in the enhanced value of this land as your answer states, where is the money going?

Answer. Section 26 of the TVA Act provides that proceeds from the sale or other disposition of real property which are not necessary in the opinion of TVA's board for the operation of TVA's dams and reservoirs; the generation, transmission, and distribution of electric power; and the manufacture, sale, and distribution of fertilizer and fertilizer ingredients shall be paid into the Treasury. All proceeds received by TVA from TRDA's activities will be subject to this requirement.

PICKWICK LANDING LOCK AND DAM

Question. The 1984 justification material shows an October 1984 date for operation of the new Pickwick lock and dam. This is a 6-month slip from the April 1984 date presented last year. Further, project completion is scheduled for August 1985. What is the status of project construction and do you anticipate any additional delays?

Answer. TVA has had a good construction program in place for this project, and was able to maintain the same lock operation schedule since construction started in 1978 until our 1984 request. Because of general funding limitations and other higher priorities, the full amount needed to keep the project on schedule is not requested. The preliminary analysis of the impact of the funding limitations included in the President's budget request for 1984 indicated a 6-month delay in the lock operation schedule to October 1984, and a 12-month delay in the project completion schedule August 1986. However, a subsequent detailed analysis indicates that the lock can be operational in July 1984 and the project completed in August 1985. We have completed over 80 percent of the project to date with all work finished for the main lock excavation and the new earth dam. The concrete program has progressed very well and approximately 99 percent of all concrete work is completed. We have awarded most of the major contracts including the gate structures and operating equipment, floating mooring bitts, the towing and haulage equipment, and some miscellaneous wall armor and steel contracts work for the lock.

During this year, we will continue earth excavation for the approach channel and begin some dredging work, install the lower gates, valves, and operating machinery, complete the concrete placement for the approach channel walls and the operations building, and begin removal of the cofferdam.

With the funds proposed for fiscal year 1984, we will complete construction of the lock operations building, approach channel dredging, cofferdam removal, and installation of all equipment and feature items necessary for lock operation in July 1984.

The project has progressed well up to now due, in part, to the efficient construction schedule and this committee's attention to funding requirements. If progress continues as planned, we do not foresee any requirement for additional funds from that currently estimated. We are positive this will continue and that the Pickwick project will be placed in operation as now scheduled and within budget.

Question. How will the August 1986 completion date for Pickwick impact the opening of the Tennessee-Tombigbee Waterway to through navigation which is scheduled for September 1985?

Answer. There will be no impact as long as Pickwick lock is in operation prior to the opening of the Tenn-Tom. The current schedule for operation of the Pickwick lock is July 1984.

NATURAL RESOURCES ADDITIONS AND IMPROVEMENTS

Question. Under the natural resources capital investment program, $860,000 is requested for additions and improvements for maintenance facilities and equipment. This is a $689,000 increase over the amount budgeted last year. Explain the reason for such a large annual increase.

Answer. In this category, TVA finances a variety of equipment and facilities that are used in maintenance activities on and around TVA multipurpose dams. The amount of equipment and/or facilities varies year to year, based on need. This is evident in the budgeted amounts in fiscal years 1983 and 1984. In 1983 TVA plans to utilize $171,000 for small equipment purchases, whereas in 1984 our request is $860,000. We only request equipment that is necessary to maintain our facilities.

Question. Provide a detailed breakout of how the funds are to be used giving the dollar amount and a brief description of the proposed work.

Answer. The following table provides a detailed breakout of funding requirements for maintenance equipment and facilities in fiscal year 1984:

Boats and motors	$30,000
Tractors, mowers, trailers	349,000
Maintenance base on Guntersville Reservoir	40,000
Three equipment storage sheds	25,000
Replace warehouse roof at Big Sandy	15,000
Pave reservation road on Tims Ford Reservoir	15,000
Mobile radios	74,000
Miscellaneous small equipment and replacement parts	257,000
Replace guard posts and rails at Kentucky Dam	9,000
Install warning signs at rock weir below Norris Dam	5,000
Administrative and general expense	41,000
Total	860,000

ADDITIONS AND IMPROVEMENTS (NATURAL RESOURCES)

Question. Please provide a similar breakdown for fiscal year 1983. Is this area of expenditure controlled by any planning process? Provide further breakdown of the miscellaneous small equipment and parts line which represents a third of the total.

Answer. The following table provides a detailed breakdown of funding requirements for maintenance equipment and facilities in fiscal year 1983:

Boats and motors	$45,000
Tractors, mowers, trailers	47,000
Miscellaneous equipment and replacement parts	33,000
Base radio station (Normandy)	6,000
Flammable material storage building	6,000
Security fencing	15,000
Mobile radios	10,000
Administrative and general	9,000
Total	171,000

As you know, TVA has management responsibilities for an integrated system of 38 dams and reservoirs. This reservoir system encompasses 11,000 miles of shoreline and 347,000 acres of surrounding lands under TVA ownership and control. Most of the equipment and replacement parts purchased in the additions and improvements budget category are for operating this multipurpose system of dams and reservoirs and maintaining surrounding acreage.

Planning for necessary equipment is on a 2- to 3-year cycle. Needs vary annually, reflecting repair and continued use of existing equipment whenever possible and practical. Types of equipment and replacement parts included for purchase in this category include chain saws, generators, leaf blowers, portable heaters, snow plow (Fontana), yard box, spray rigs, aerators, weed eaters, power pots (paving), welders, electric drills, roto tillers, fertilizer spreaders, lighting fixtures, light bulbs, and small tools such as hammers, axes, pliers, et cetera.

PROGRAM ADJUSTMENTS AND FLEXIBILITY

Question. What policy or guidelines has TVA developed for reviewing and approving the shifting of appropriated funds between various programs, projects, or activities?

Answer. TVA's 50-year reputation as a "can do" organization has two basic sources: a highly skilled and dedicated multidisciplinary workforce, and management which has both the authority and willingness to identify and react to changing circumstances—both problems and opportunities—in the environment within which TVA operates.

TVA approaches its budgeting responsibilities systematically. Corporate long-term strategy sessions, multiyear planning and budgeting, near-term situation assessments, management review of ongoing activities, and ranking all projects contribute to the process of budget preparation.

As actual implementation of the budget begins, however, changing economic conditions and national policy, technological breakthroughs, and changes in funding availability are all sources of information on which the board and other managers tailor the programs to insure maximum benefit and efficiency. These changes are assessed at three specific times throughout the fiscal year. In every case, of course, these changes are consistent with congressional intent and TVA's responsibilities, and are reviewed and approved by the board of directors. Any changes made are reflected in subsequent budgets, and we are happy to discuss them with the Congress.

Question. Can you be more specific about guidelines which govern the movement of funds within programs? Are there dollar levels above which decisions are made at the board level versus by office managers?

Answer. TVA does have formal delegations of authority with appropriate thresholds for many different types of activity, such as procurement and contracting authority. With respect to the movement of funds across programs, however, TVA has found over the years that such procedures cannot substitute for managerial judgment and regular communication between the board, the general manager, and office managers. Goal setting and regularly scheduled quarterly performance reviews by the board facilitate this process.

There are well-understood guidelines which undergird this process. These include a basic understanding that only the board: (1) approves changes across offices and across major program areas within offices; (2) approves decisions to carry funds forward to ensuing years; and (3) approves initiation of significant new activities during the fiscal year. These guidelines apply regardless of the dollar levels involved and reflect the responsibilities and authority of the board as set forth in the TVA Act. In short, there is no movement of funds within programs that does not require board approval.

Reservoir System Operations

Question. The budget justification for reservoir system operations claims $140 million average annual flood damage prevented and a $100 million savings to shippers compared to the next most economical alternative. What is the basis of these estimated benefits?

Answer. The average annual flood damage prevented is based on damages that would have occurred within the Tennessee Valley and along the lower Ohio and Mississippi Rivers during the last 10 years if the TVA system had not existed. Because of the operation of the TVA system of reservoirs, a total of over $1.4 billion in damages was prevented during the period. The benefits are based on estimates of the agricultural, municipal, and industrial developments in the vicinity of the reservoir system that would have suffered damage.

The savings to shippers is based on the difference between the cost to ship goods on the waterway and the cost to ship by the next most economical means.

Insect and Aquatic Weed Control

Question. I believe almost $1.9 million is being requested for insect and aquatic weed control for 1984. How does this compare to the 1983 funding level and budget request? What do you anticipate the annual funding requirements will be for each of the next 5 years?

Answer. The 1984 request for insect and aquatic weed control of $1.9 million is essentially the same as the 1983 funding level. Annual funding requirements for each of the next 5 years have not been developed at this time; however, we project a general overall increase unless alternative control strategies being considered can be tested and proven acceptable. An increase will be required just to maintain the same level of control because of expected discoveries of new colonies of both Eurasian watermilfoil and hydrilla. The unit cost of treatment is also likely to increase as the dispersal of new areas increases. Our greatest need for the next 2 to 3 years is to test the white amur (fish) as a biological control agent in the Tennessee River reservoir system, particularly in light of our recent discovery of hydrilla.

Investigation and Control of Reservoir Ecology

Question. Can you give more specific estimates of funds required in the next 5 years? What is the planning process for weed control?

Answer. We are quite concerned about the spread of newly discovered hydrilla infestations in the TVA reservoir system. This growing problem, combined with rainfall and temperature variables, makes it very difficult to accurately develop 5-year control cost estimates. We now estimate that the $1.9 million base program for insect and aquatic weed control will need to increase by at least 10 percent per year during this period in order to maintain current levels of control. This is at the low range of potential needs. We have plans to test the white amur (fish) as a biological control agent for aquatic weeds which requires $350,000 per year for 3 years. This development of biological controls has high potential for lower cost, more environmentally acceptable control in the long run, but will not materially affect needs over the next few years.

The annual planning process for aquatic weed control begins by assessing the total infestation in all reservoirs. Then the number of critical areas to be treated on a priority basis is determined, schedules of treatment detailed, and work plans finalized. In addition, TVA tests new chemical formulations and application techniques for their effectiveness in aquatic weed control, studies with biological controls such as the flea beetle for alligatorweed control, and evaluates effectiveness of mechanical harvesters.

TVA works closely with other Federal and non-Federal agencies having an interest or expertise in this area. The most active avenue for cooperation is through the Federal aquatic plant working group within the Interagency Research Coordinating Conference. Members include TVA, the Corps of Engineers, the Bureau of Reclamation, and Bonneville Power.

Question. How is your work coordinated with other Federal agencies?

Answer. Close collaboration on the management of aquatic vegetation has been maintained with the U.S. Army Corps of Engineers, aquatic plant control research program; U.S. Department of the Interior, Bureau of Reclamation; and the U.S. Department of Agriculture, Agriculture Research Service. Since 1977 these agencies, along with TVA, have been members of the Federal Aquatic Plant Management Working Group that cooperates to avoid duplication of research, expedites transfer of control technology, coordinates Federal efforts in registering aquatic herbicides, and assesses the extent of infestation and the impacts of aquatic weeds on agency operations.

Vector control activities are coordinated formally through membership in the Armed Forces Pest Management Board. The major agencies of this Board are the U.S. Department of Agriculture, the U.S. Public Health Service, the Department of Defense, the Environmental Protection Agency, and TVA. TVA is also a member of the medical entomology committee of this Board. Cooperative studies are conducted under letter of agreement or contract with the U.S. Public Health Service and the U.S. Department of Agriculture.

PLANT PROTECTION AND SERVICES TO VISITORS

Question. Nearly $3 million is requested for plant protection and services to visitors in 1984. How does this compare to the 1983 funding level and budget request?

Answer. The 1984 budget request will allow TVA to continue to provide plant protection and services to visitors at the same level of effort as that conducted in 1983 which was budgeted at $2.97 million.

Question. Twenty-four hour security is to be provided at 17 projects. What is the total cost of providing this security? Provide for the record a detailed breakout of the cost, by project, including a brief description of what protection is provided.

Answer. TVA maintains a well-trained and well-equipped force of public safety officers to protect TVA multipurpose facilities from fire, theft, vandalism, sabotage, and civil disorder. In addition, these officers receive and safeguard visitors, conduct tours, and relate specific information on the local projects.

[Dollar amounts in thousands]

Project	Budget	Service provided		
		24-hour security	Police/fire protection	Visitor reception
Chickamauga	$262	X	X	X
Hiwassee	195	X	X	X
Nickajack	181	X	X	X
Watts Bar	168	x	X	X
Fort Loudoun/Melton Hill	449	X	X	X
Norris	204	X	X	X
Fontana	260	X	X	X
Cherokee	242	X	X	X
South Holston/Watauga	287		X	X
Douglas	242	X	X	X
Boone	104	X	X	X
Tellico	104		X	
Pickwick	202	X	X	X
Wheeler	175	X	X	X
Guntersville	198	X	X	X
Wilson	252	X	X	X
Kentucky	208	X	X	X
Total	3,733	17	19	18

Question. What criteria is used to determine if 24-hour security is needed?

Answer. The factors considered in determining if 24-hour security is needed at multipurpose projects include amount, type, and use of recreational facilities; vulnerability of TVA property to potential damage and vandalism; value of exposed property; criticality of facilities to power network; and other types of protection available, including staffing by other TVA personnel, fencing, and activities of other law enforcement agencies.

Question. Has TVA explored alternatives to using its own public safety officers such as contracting it out or developing agreements with local law enforcement units? Has TVA done cost comparisons of any alternatives?

Answer. In April 1981, TVA initiated a review, in conjunction with its ongoing program evaluation process, of the general practices for choosing whether to carry out TVA's activities with its own employees or with contract work forces. The first two phases of this review focused on TVA's design and construction work forces and on its operation and maintenance activities.

At the present time, TVA is involved in the third phase of this review, examining the practices for deciding whether to provide services in-house with its own employees or by contract with the private sector. Security services is one of the four general categories of services selected for this broad review of existing TVA policies and management considerations for choosing between in-house and contract labor forces. After the completion of this phase, recommendations will be made as appropriate for improvements in TVA's decisionmaking process.

In this regard, it should be noted that the role and purpose of TVA's public safety officers are far broader than the types of contract services generally offered by private firms or local law enforcement agencies. In addition to property protection, TVA's public safety officers are responsible for a wide variety of administrative functions and visitor information and related services on TVA lands and at a number of its facilities. In this capacity they serve as TVA's representatives to the public, and it is important that TVA has control over each individual's selection and over the nature and extent of each public safety officer's training.

In situations where these additional responsibilities are not required, TVA does consider the use of privately owned security businesses to determine if security forces may be more cost-effectively provided by contract. For example, TVA chose to have night guard services provided by a contractor at its exhibit at the 1982 World's Fair.

RESERVOIR LAND PLANNING

Question. Under reservoir land planning, $597,000 is requested to generate land management plans for TVA lands at mainstream reservoirs. Could you explain the purpose of this activity in more detail? How do you see the product used? What is the average cost of one of these studies? Specifically what is the estimated cost of the Watts Bar study which will be initiated in 1984 and how much of the $597,000 request will be allocated to the study?

Answer. The purpose is to develop plans which will guide and direct the use and management of the public lands around TVA multipurpose reservoirs. The plans will expedite TVA's handling of requests for the use of its lands. The plans identify and allocate lands for a variety of uses, including industrial and commercial development, commercial navigation, forestry, wildlife, recreation, and agriculture. Development of the plans involves public participation wherein careful consideration is given to the priorities of local individuals and groups, particularly those residing in communities in the immediate reservoir area. The plan is not a rigid master plan but is used as a flexible guide to facilitate land management decisions, identify sites for specific economic and natural resources development proposals, and expedite the daily handling of TVA's land-use and management activities. Average cost varies widely depending upon size of the specific reservoir. To date, two reservoir plans have been completed and a third is in preparation. The average cost has been $550,000 per plan. Estimated cost of the Watts Bar study is $525,000. Of the $597,000 requested in 1984, $150,000 will be used to initiate Watts Bar and the balance will be used to complete the plan for Kentucky Reservoir.

MAINTENANCE OF STRUCTURES, EQUIPMENT, AND IMPROVEMENTS

Question. The budget justification for maintenance of structure indicates 18 projects for pavement resurfacing and major repair will be conducted. Provide for the record a list showing the location of each project and a brief description of the existing condition and estimated repair cost.

Answer. The following TVA dam reservation roads and parking areas are scheduled for pavement resurfacing and repair in fiscal year 1984:

[Dollar amounts in thousands]

Location	Project	Condition	Cost
Tennessee:			
Boone Dam	1 access road; 3 parking areas.	Partial sealing 1974. Paving cracked, roadbed endangered.	$50
Pickwick Dam	1 access road; 3 parking areas.	Last paved 1966. Paving cracked, deteriorated. Roadbed endangered.	$110
Alabama:			
Guntersville Dam	1 access road; 1 parking area.	Last paved 1965. Paving cracked; roadbed endangered.	$200
Wilson Dam	1 access road; 2 parking areas.	Last paved 1972. Surface cracked, deteriorated. Roadbed endangered.	$55
Wheeler Dam	1 access road; 1 parking area.	Last paved 1966. Surface cracked, deteriorated.	$10
Kentucky: Kentucky Dam	1 access road; 2 parking areas.	Last paved 1974. Paving cracked; sealcoat required.	$75

RESERVOIR LAND MANAGEMENT

Question. The budget request for 1984 includes $3,922,000 for reservoir land management. How does this compare to last year's funding and budget request levels?

Answer. The funding level for fiscal year 1983 is $3,831,000. The proposed 1984 increase does not cover the current rate of inflation. Minor reductions in frequency or deferral of work at selected public use areas will result.

Question. The justification material indicates that revenues are derived from the activities under this heading. Provide for the record the actual amount of revenues received for each of the activities mentioned for the most recent 5 years of record.

Answer. The following table provides actual income for the years 1978 through 1982:

[In thousands of dollars]

Source	1978	1979	1980	1981	1982
Agricultural licenses	281	347	276	306	320
Timber sales	170	139	27	16	194
Leased or licensed boat docks	24	27	28	23	26
Cabin sites	1			1	1
Group camps					6
Fee campgrounds				45	104
Miscellaneous	9	5	4	7	16
Total	485	518	335	398	667

Income from similar sources is also received in the category operation and maintenance of dam reservations.

FOREST RESOURCES

Question. Briefly, what are the goals and objectives of the WOODPLAN program which is part of the forest resources request? What portion of the $1,723,000 budget request for forest resources is specifically for WOODPLAN?

Answer. Woodland planning and analysis system (WOODPLAN) is one tool intended to support improved forestry management practices. It is an integrated collection of programs that operate on microcomputers. This system is designed to transform highly technical forest research information into a practical, easy-to-use form. The primary goal of WOODPLAN is to help foresters improve the productivity and quality of valley forests through development and assurance of availability of state-of-the-art, computer-assisted management planning and implementation tools. Specific goals are to increase per-acre productivity of the forests by 50 percent and to attain acceptable levels of forest management on 90 percent of the commercial forests of the Tennessee Valley by the year 2000.

The major objective of WOODPLAN is to demonstrate planning techniques that will serve the needs of some 380,000 private, nonindustrial landowners in the Tennessee Valley who control nearly 16 million acres, 77 percent of the region's forests. Other objectives are to increase the use of WOODPLAN to achieve more effective management of industrial and public forests in the region and to use WOODPLAN as a model for similar programs in other regions of the United States and other countries. As others adopt the technique to meet their needs, TVA will reduce and finally terminate its activities.

Approximately $575,000 of the $1,723,000 forest resources budget request for fiscal year 1984 is for WOODPLAN.

Question. How much funding is being requested to conduct the 25 workshops planned for 1984? How does this compare to 1982 and 1983?

Answer. An estimated $25,000 will be spent on workshops in fiscal year 1984. A total of $43,000 was spent on workshops and training sessions in fiscal year 1982 and about $31,000 is budgeted in fiscal year 1983.

Question. What is the total annual cost of the WOODPLAN program?

Answer. Average annual cost of the WOODPLAN program has been $550,000.

Question. Who are, or will be, the users of the WOODPLAN program? Is any cost sharing or user fee being charged?

Answer. There are currently a total of 75 WOODPLAN users, from Texas to Nova Scotia, including: 13 colleges and universities, 7 State natural resource agencies, 20 private commercial foresters, 14 forest products industries, 10 U.S. Forest Service users, 7 State cooperative extension services, and 4 others.

Any forester or forestry organization that manages forest lands or works with private landowners who own woodlands is a potential user of the WOODPLAN system.

The approach for charging fees currently being considered involves establishing a cooperative user organization that would handle all services, other than software development, and make appropriate charges for services rendered. Cooperative development and cost-sharing agreements have been developed with the following organizations: U.S. Forest Service, Alabama Forestry Commission, Kentucky Division of Forestry, Mississippi Forestry Commission, Tennessee Division of Forestry, Alabama Cooperative Extension Service, South Carolina Extension Service, Koppers Co., Columbia Plywood Corp., Tennessee River Pulp & Paper Co., and Tandy Corp.

Question. What is the anticipated level of charges for services being considered under the cooperative agreements being developed with specific organizations? Is the $575,000 for WOODPLAN in fiscal year 1984 all from appropriated funds or would any user fees be contemplated to offset the amount funded from appropriations?

Answer. The $575,000 for the woodland planning and analysis system in fiscal year 1984 is for forest management related software development and is entirely from appropriated funding. Typical of its demonstration activities over a 50-year history, TVA will phase out its direct financial support for this specific project as its activities are assumed by others. In this case, TVA will continue to participate as a regular paying member of the institute.

Past cooperative development and cost-sharing arrangements made with specific organizations have involved projects of mutual benefit for which charges for services were not appropriate. TVA is currently helping establish a cooperative user organization, the Forest Resources Systems Institute, as a private, nonprofit corporation. The institute, rather than TVA, will provide forest management services to its member organizations.

WILDLIFE RESOURCES

Question. The 1984 request for wildlife resources is $950,000, a $200,000 increase over the 1983 budget request. First, what level of funding did this program receive under the continuing resolution?

Answer. The wildlife resources development program received $750,000 in 1983 appropriated funds. There was no change in program funding as a result of the continuing resolution.

Question. What new activities, not undertaken in 1983, will be initiated in 1984? How much will be allocated to each and what is the total cost of each activity?

Answer. The increase proposed for 1984 will be used to put greater emphasis on the development and management of the valley's ecologically indispensable wetland resources and for improved resource stewardship and protection of previous investments on TVA lands. This work largely represents an upgrading of existing activities to adequate levels rather than a new initiative. Declining budgets in recent years for operation of TVA's 15,000 acres of dewatering areas have precluded dike and levee repair, electrical control panel repair, and other scheduled maintenance. These reduced budgets have jeopardized highway and railroad embankments, valuable bottomland timber, croplands, and wetland resources. Approximately $100,000 of the increase will be used to reestablish adequate maintenance and management practices associated with these dewatering activities.

The remaining funds will be used for cooperative projects with valley States and other organizations to improve rather than simply protect important wetland resources by developing and testing less costly techniques for management; restore wildlife habitat on TVA lands; develop waterfowl habitat on tributary reservoirs; and restore bald eagles, osprey, golden eagle, and great egret nesting populations in two additional valley States.

ENVIRONMENTAL/ENERGY EDUCATION

Question. Briefly, what is the purpose and objective of the environmental/energy education program? When was the program initiated and how have the objectives changed over the years?

Answer. Environmental/energy education emphasizes the relationships among the natural and manmade environments and includes environmental, energy, and economic concepts as interrelated parts of a quality life. The major goal is to provide environmental/energy education opportunities for the valley populace. The key program objectives are to: (1) Improve quality of life in the valley through environmentally oriented education; (2) Assist in the development of attitudes, values, and life styles which result in a citizenry that is aware, concerned, and motivated to work on environmental concerns; and (3) Provide learning experiences which involve people in practical problem-solving and decisionmaking on the utilization of resources.

The environmental/energy education program began at TVA's Land Between the Lakes (LBL) in 1964. Along with outdoor recreation, it was one of the dual demonstrations for which LBL was designed.

The program was expanded to a valleywide level in 1974. The objectives changed from demonstrations and programing on a large land base to offering programing to parts of seven States, impacting both general citizens and students. The objectives were, to a large extent, expanded to be more inclusive of the diversity of the population of the valley, and included the urban as well as the natural environment. This was particularly appropriate as the problems began to include major energy and economic concerns.

Question. Why do you feel that teacher training is a responsibility of the TVA?

Answer. Teachers are the principal agents for delivery of awareness, knowledge, skills, and patterns of action to the 2 million students in the valley. The multiplier effect—one teacher's ability to impact numerous students—makes teacher training a highly efficient mechanism in terms of total individuals affected.

Support of teacher training in environmental/energy education furthers the TVA mission of improvement of the quality of life in the valley. Limited direct teacher training is occasionally provided by TVA staff; however, the vast majority of teacher training services are provided through regional universities which have centers for environmental and energy education established with TVA assistance.

Question. How is the program managed in order to insure that the institutions become self-financing in 5 years?

Answer. TVA, when entering into discussions with universities interested in centers for environmental and energy education, makes clear the cooperative nature of support for the center and the temporary contribution by TVA. TVA's practice has been to reduce the level of funding over the term of the contract so that the university and others absorb the reductions in TVA contributions without great negative effect. By the fifth year, TVA's contribution decreases to 50 percent of that of the first year. The university, with assistance from others, assumes the total cost and the center becomes self-sustaining at the start of the sixth year. Centers at Murray State University and Middle Tennessee State University now receive no TVA financial support.

Question. For each program, give the starting year of TVA funding and level in that year. Also provide the fiscal year 1984 levels for each program.

Answer. The following table shows the starting year of TVA funding, level of TVA funding in that year, and 1984 funding for each university center established to date:

University	Starting fiscal year of TVA funding	Dollars in starting year	1984 dollars from TVA
Murray State, Murray, Ky	1978	$20,000	
Middle Tennessee State, Murfreesboro, Tenn	1980	20,000	
Memphis State, Memphis, Tenn	1980	20,000	$10,000
North Mississippi Environmental Education Consortium, Booneville, Miss	1980	20,000	10,000
The University of Tennessee at Chattanooga, Chattanooga, Tenn	1980	20,000	10,000
Western Carolina, Cullowhee, N.C	1980	20,000	20,000

Question. Provide for the record a list of the centers which have been established to date which includes the cost to establish each, the annual operating cost, and the cooperative funding provided by the school and universities involved and by the State.

Answer. The following six centers have been established to date. Costs include funds through fiscal year 1983.

Establishment costs to date

[In thousands of dollars]

Center	
Memphis State University (Tennessee)	$75
Middle Tennessee State University	40
Murray State University (Kentucky)	75
North Mississippi Environmental Education Cosortium[1]	75
The University of Tennessee—Chattanooga	75
Western Carolina University	80

[1] Includes University of Mississippi, Mississippi State University, Itawamba Junior College, and Northeast Mississippi Junior College.

The following table presents fiscal year 1983 operating budgets for each center, including TVA contributions and funds provided by the universities and others. Murray State and Middle Tennessee State Universities are self-sustaining, currently operating without direct TVA financial support. The only State funding involved is that which comes to the colleges and universities through annual appropriations.

FISCAL YEAR 1983 FUNDING FOR ENVIRONMENTAL AND ENERGY EDUCATION CENTERS

[In thousands of dollars]

		University			
	TVA	Direct	In-kind	Other[1]	Total
Memphis State University	15	13	12	2	42
Middle Tennessee State University		10	5	8	23
Murray State University		37	2	17	56
North Mississippi Environmental Education Consortium	15	16	19	18	68
The University of Tennessee-Chattanooga	15	20	3	2	40
Western Carolina University	20	36	3	18	77
Total	65	132	44	65	306

[1] This column represents funds that were received by contracts, agreements, etc., prior to Dec. 1, 1982. These amounts should increase during the remainder of 1983.

Question. The budget justification says that $3 of outside investment is generated for each $1 of TVA funding. How do you determine the 3-to-1 benefit-cost ratio?

Answer. The 3-to-1 benefit-cost ratio associated with the university-based centers for environmental and energy education refers to support by the universities and other sources in comparison to that from TVA during the first 5 years of operation of each center. The ratio between the amount of support from the university and others compared to that from TVA has averaged 3 to 1 for the last 2 years. No center is funded entirely by TVA and all are anticipated to be self-sustaining within 5 years from their establishment. This dictates that substantial long-term support by each university and other sources be generated to insure success after TVA financial support ends. The effect of TVA's role continues to be reflected in the absence of the self-initiated formation of university training centers where TVA has not been involved.

Question. What is the future of the programs when they are taken over by the universities? Does TVA see reason to be optimistic that they will continue without the Federal contribution from TVA?

Answer. When taken over by the universities, the centers will continue to provide the four basic services of program development, teacher training, regional service, and research. They will continue to seek funds from a variety of governmental, private, and public organizations, as well as continuing to operate under university funding.

Based on the first centers to become self-sustaining, TVA is optimistic that the centers will continue. The Murray State center, which has been self-sustaining for 2 years, has maintained a budget equal to that in TVA-funded years and continues to provide the four basic services to its region in western Kentucky. It is realistic to assume that some of the centers will be more successful than others during their self-sustaining phase; however, TVA believes that most will continue to provide valuable services to the valley.

Question. What criteria are used to determine what the appropriate level of cost sharing should be?

Answer. In initial discussions with universities interested in the establishment of centers for environmental and energy education, TVA clearly establishes that its role is temporary, generally limited to 5 years. The intent is to create a self-sustaining center for environmental and energy education. Costs are initially shared on an equal basis to establish full partnership and affirm the front-end commitment of the university for continuing support of the center. Subsequent funding levels are determined on a basis which will allow the center to become self-sustaining as TVA gradually phases out its direct financial contribution over a specified period of time. Centers at Murray State University and Middle Tennessee State University now receive no TVA financial support.

RESOURCE MANAGEMENT AND DEVELOPMENT SUPPORT

Question. The 1983 justification material for resource management and development support showed an estimated program of $2,105,000 for 1982. This year, the 1984 budget justification showed an actual 1982 program of $2,650,000. How do you account for this difference?

Answer. The $2,105,000 figure for 1982 funds in TVA's 1983 budget justification included funds for the following programs: Valley mapping and remote sensing, regional air management, and conservation of public lands and waters. In addition to those programs, the 1983 budget justification also contained a separate category for the acidic precipitation program with a 1982 budget of $328,000. In the 1984 document, acidic precipitation activities and funds were included under the broad category of resource management and development support. The remaining difference of $217,000 in actual spending resulted in a $93,000 increase to the valley mapping and remote sensing program, $50,000 for regional air, and $74,000 for the acidic precipitation program.

VALLEY MAPPING AND REMOTE SENSING

Question. The 1984 budget justification for valley mapping and remote sensing indicates that TVA plans to complete 45 and initiate 44 manual map revisions. First, why are these revisions necessary?

Answer. Periodic inspection of high-altitude photography will determine if enough significant natural and manmade changes have occurred in the area covered by each map to warrant the map's revision. Without such periodic revision to show changes (highways, housing developments, industrial sites, dams, impacts of surface mining, et cetera), the public and the region's decisionmakers would have inaccurate maps. A periodic revision program is necessary if the 775 quadrangle maps covering the valley area are to be useful. TVA performs this work in the Tennessee Valley watershed under a long-standing agreement with the USGS and in coordination with national mapping plans.

Question. How much is included in the 1984 budget for this work?

Answer. The 1984 budget includes $460,000 for this work.

Question. How long does it take to make a revision and what is the cost?

Answer. The time required and the unit cost vary with the amount of map detail. For example, an urban area is more costly than a rural area. Also, the type of revision is a factor. The fastest and least costly revision is the photorevision method which requires from 6 months to 1 year to complete and costs from $4,000 to $6,000 per map. The more expensive method is the standard cartographic map revision which requires from 2 to 3 years to complete and costs from $10,000 to $15,000 per map.

Question. Why can't TVA use maps revised by others?

Answer. The U.S. Geological Survey (USGS), which has nationwide responsibility for production and revision of this type of map, could revise valley maps. However, an excerpt from the memorandum of agreement between USGS and TVA with respect to these maps states the following: "The USGS, the Federal agency having the responsibility for preparing and maintaining the national topographic map series, recognizes that the TVA has immediate knowledge of and access to existing survey data and related information of the area within its regional limits and that the TVA has developed an expertise in map revision activities that can contribute to the national topographic map series. Both agencies consider it to be in the Nation's interest for TVA to continue to apply its available mapping capacity in a manner and to an extent that is consistent with the goals of the national topographic program and that contributes to maximum efficiency."

Question. What would be the impact on TVA if these revisions were postponed?

Answer. The use of these maps goes far beyond TVA itself. The general public relies on accurate topographic maps as it continues to put increased emphasis on use of the region's lands and resources. There is a considerable investment represented by the maps produced by TVA over the years. Protecting the value of that investment—that is, the usefulness of the maps themselves—requires that they be kept current through periodic inspection and, where necessary, that they be revised to reflect recent natural and manmade changes.

PROTOTYPE LAND USE/LAND COVER THEMATIC OVERLAY

Question. Explain the need and use of a prototype land use/land cover thematic overlay.

Answer. Many basic, important land resource questions continue to be asked concerning the area and/or distribution of such attributes as forest cover, nonpoint water pollution sources, agricultural lands, urban growth, and a number of other features. Such questions generally are not adequately answered because of the prohibitive cost associated with deriving answers using traditional data collection methods. The prototype land use and land cover inventory will demonstrate a cost-effective alternative.

It will take advantage of a cooperatively funded Federal project, the national high-altitude photography program (NHAP), as its basic data source. This aerial photography will be used to map land use and land cover over a 2,000-square-mile demonstration area, to a 1-acre level of detail which will include approximately 250 attributes. The prototype will demonstrate the feasibility of providing a current, unbiased, standard land resource information base for the entire valley. The information base will provide the only realistic means to answer many resource data needs of the agency, the region, States, counties, and communities.

Question. What advantages do the land use/land cover thematic overlays provide that do not exist with available topographic series maps?

Answer. Existing 7½-minute topographic series maps concentrate on a small number of relatively slow-changing features such as major roads, significant tree cover, major drainage, and some cultural features. Details of land cover are not shown and only limited land uses such as orchards and cemeteries are indicated. An agency with responsibilities as far ranging as TVA requires supplementary and complementary information which is not shown on these maps. For example, land resource planners and managers need to know what use the cleared areas shown on the maps represent. It is important to know whether such areas are pasture, row crops, cover crops, brushland, clear-cut forest, barrenland, or vacant land waiting for development. In addition, wetland categories and forest types need to be known. The land use and land cover overlays will show these and other details.

Question. How much is included in the 1984 budget for the land use/land cover thematic overlay demonstration?

Answer. The 1984 budget proposal includes $50,000 for this demonstration.

VALLEY MAPPING AND REMOTE SENSING

Question. Provide the total cost of the thematic overlay demonstration and the years of the project.

Answer. The total cost and duration of the demonstration will be $100,000 in 1984 and $50,000 in 1985.

CONSERVATION OF PUBLIC LANDS AND WATER

Question. The 1984 budget material includes funds to conduct two archaeological site inventories. Are these new efforts which will be initiated in fiscal year 1984?

Answer. No, this is a continuing effort, required by the National Historic Preservation Act of 1966. While the requirement is for inventory of all TVA lands, efforts are currently being concentrated in areas where Archaeological Resource Protection Act violations, particularly looting of prehistoric graves, are most likely.

Question. What is the total cost of these inventories?

Answer. The funding to conduct a stratified sample inventory of two selected reservoir areas in fiscal year 1984 is $135,000.

Question. Will they be conducted by TVA personnel?

Answer. The actual inventory will be conducted under contract by a valley university. However, preparation of work plans and the inventory itself will be reviewed and approved by TVA staff.

Question. Explain what archaeological resource will be inventoried and why they are unique.

Answer. TVA will inventory two areas on Guntersville Reservoir in north Alabama to determine what historic and prehistoric resources exist and evaluate them for their uniqueness and regional or national significance. Guntersville Reservoir was selected because of a lack of information about cultural resources on this reservoir and due to discovery of extensive looting and destruction of cultural sites. These sites will be inventoried, the information gathered, and, coupled with data from future sampling at Guntersville Reservoir, will be valuable for planning land uses and will be integrated into a regional information base.

LAND BETWEEN THE LAKES

Question. The budget justification for Land Between the Lakes shows funding from nonpower proceeds increasing from $819,000 to $909,000 in 1984. What has been the yearly average of nonpower proceeds allocated to Land Between the Lakes and what is the source of the revenues?

Answer. A total of $3,384,000 of nonpower proceeds was collected at Land Between the Lakes from fiscal year 1978 through fiscal year 1982 for a 5-year average of $677,000. Revenues are generated from the sale of timber and from user fees at group camps, family campgrounds, and environmental education facilities.

Question. Specifically, what will be the sources of the $90,000 increase over the current level?

Answer. The $90,000 increase in nonpower proceeds projected for fiscal year 1984 will be derived from timber sales, $30,000; family campground fees, $45,000; and group camp fees, $15,000.

Question. The justification material also shows that Land Between the Lakes (LBL) will focus more attention on becoming a visitor destination in order to expand benefits to more taxpayers. Could you explain in more detail how this will be accomplished?

Answer. LBL will coordinate promotional efforts with local, regional, and State tourism organizations. Private-sector cooperation will allow increased LBL visibility at regional and national travel shows and other media coverage. Visitation to the region should increase as the result of a greater market awareness of what the region has to offer.

Question. Provide a detailed analysis of how the user fee income at LBL is generated.

Answer. Income is generated from daily campsite fees at family campgrounds and from registered overnight stays and meal fees at group camps and environmental education facilities. A listing of the facilities at Land Between the Lakes generating revenue from user fees and the fiscal year 1984 revenue estimates for each is as follows:

Facility	*1984 estimates*
Youth Station	$96,000
Hillman Ferry Campground	187,000
Piney Campground	127,000
Brandon Spring Group Camp	224,000
Camp Energy Group Camp	25,000

ECONOMIC AND COMMUNITY RESOURCES

Question. A review of the 1982 budget justification and subsequent congressional action shows no request or appropriation for economic resource capital investments. Please explain why the 1984 budget justification shows an allocation of $4.2 million.

Answer. The $4.2 million included in the budget justification resulted from the continuing resolution, as a result of which TVA funding is almost $10 million greater than was originally submitted in the budget request for fiscal year 1983. TVA allocated a portion of these extra funds to improvements at Yellow Creek Port in northeast Mississippi consistent with congressional direction contained in the House Appropriations Committee report for fiscal year 1983.

YELLOW CREEK PORT, MISS.

Question. Was this a new program, project, or activity not undertaken in fiscal 1982? If this was a continuing activity, when was it first presented to the Congress for appropriation of funds?

Answer. TVA did not fund any improvements at Yellow Creek Port in 1982. However, TVA has made available technical assistance to the port authority and did jointly fund, with the State of Mississippi, initial development of the site. As a result of recommendations by Congress in TVA's fiscal year 1970 appropriations language initiating planning and development of the port, TVA submitted its first request for funding as a part of its fiscal year 1971 budget justification.

Question. How, specifically, will the $4.2 million be used?

Answer. The funds will be used for additional site improvements, construction of two industrial-type buildings, and acquisition of port-operating equipment.

Item	*Cost*
Site improvements	$1,300,000
Buildings	2,000,000
Operating equipment	630,000
Project management	270,000
Total	4,200,000

Question. Under what authority was this allocation made?

Answer. This allocation was made by the TVA board of directors under the provisions of the TVA Act and was consistent with congressional intent as expressed in the House Appropriations Committee report for fiscal year 1983.

ACTIVITIES OUTSIDE TVA REGION

Question. How much, for the last 3 years, of the funds allocated for economic and community resources has been used for activities outside the Tennessee Valley? Please be specific as to the State and locality, type of assistance, amount of funding from TVA and other sources, and what the funds were used for.

Answer. TVA spent $500,000 in fiscal year 1982 in southeastern Oklahoma. TVA received a special appropriation ($500,000) in the fiscal year 1982 budget to disseminate the benefits that have been derived from (TVA's) experience in the fertilizer development program and related agricultural, regional, and economic development activities (House Appropriations subcommittee report). Southeastern Oklahoma has many of the same water, timber, agriculture, and minerals resources that exist in the TVA region. The region is one of the poorer sections of Oklahoma and is committed to using its natural resources to stimulate economic development. In fiscal year 1982, TVA worked with a team of local, State, and Federal agencies to prepare a comprehensive resource development action plan for the water and other natural resources of the 24-county southeastern Oklahoma project study area.

Funds in the amount of $250,000 were used to support the work of TVA program staff and $250,000 was transferred to a local development agency to assist in meeting project goals. Other project participants and funding which they provided included the Corps of Engineers ($200,000) and the Bureau of Reclamation ($100,000).

Fiscal year 1982 activities have included technical assistance from TVA, COE, and BOR in preparation of an action plan that assesses opportunities and lays out development strategies for achieving the optimum potential development of water and other natural resources; support of a local project staff; and funds for purchase of equipment and implementation of a leak detection program.

TVA received an additional $500,000 in fiscal year 1983 to continue its development assistance to southeastern Oklahoma. This will support TVA staff in the amount of $215,000 and provide $285,000 direct funding to the local development authority. The fiscal year 1983 funds are being used to implement elements of the action plan prepared in 1982, including a water supply and distribution network design, a forest utilization facility, a tourism promotional effort, and a high-sulfur coal utilization demonstration. Project participation by COE ($150,000) and BOR ($100,000) will also continue in 1983.

COST-SHARING PROVISIONS

Question. Since there is a potential for sizable local economic benefits, why should the economic and community resources program not be cost shared on a 50–50 basis?

Answer. TVA agrees that the economic and community resources program has potential for sizable local economic benefits. For this reason, the responsibility for project implementation rests with the local community. Generally, TVA's participation in these projects consists of providing technical advice and assistance which is used as a catalyst to mobilize participation in these projects by other governmental agencies and local organizations. The local community and these entities generally provide the bulk of project funding, both to cover direct expenses and provide staff for project implementation. When TVA does provide financial assistance in this program, it is generally limited to only a portion of total project costs.

SPECIAL OPPORTUNITIES COUNTIES AND CITIES

Question. The 1984 budget justification indicates that in 1982 a revolving loan fund was established to assist local industries to expand. A review of the budget justifications and Senate hearings indicates that a request was never presented to this committee to establish such a revolving fund. First, was the need and justification for a revolving fund presented to this committee? Under what authority did TVA establish this fund and what was the source of funds? How much was initially allocated to this revolving fund? Will any of the funds requested in the 1984 budget be used to increase the limit of available funding from the revolving fund? How much has been loaned out? How much has been paid back? What are the repayment conditions? What would be TVA's total exposure if default occurred?

Answer. The need and justification for a revolving fund was not presented to this committee because TVA has no specific fund, revolving or otherwise, from which loans are made to local organizations for community development purposes. TVA, through cooperative agreements, does provide appropriated funds to assist communities in job-creation projects. For example, in the special opportunities counties and cities (SOCC) program, which is carried out under section 22 and other provisions of the TVA Act, TVA and local communities work together to identify potential job creation projects. Recognizing that a community often lacks the funds to proceed with such projects, TVA makes the necessary funds available. Most agreements require the local organization to deposit the funds in a trust fund, administered by a local bank. In accordance with the agreements, the local organization, with TVA's approval, can either loan the money from the trust fund to a potential industry or directly use the funds for project purposes, such as development of an industrial site. While the terms of any individual loans by the organizations will vary depending on the needs of each project, generally those loans are made with interest and fully secured either through a mortgage or other security interest.

To date, about $1.6 million from the SOCC program has been deposited in various trust funds established by local organizations to be used for loans and we expect to be using funds from the 1984 SOCC budget for similar job-creation projects. Under the project agreements, each local organization is required to place any loan repayments collected into its trust fund. This makes sure they stay in the program and continue to be used for program purposes rather than used by the local organizations for other purposes.

At the conclusion of each project, all money remaining in these trust funds will then be returned to TVA or devoted to other TVA-approved projects in the region. Since all of these projects only recently began, none have reached the point for the return of any of these funds.

We think the term exposure is not relevant to these projects. TVA has not made loans. The full $1.6 million is intended to be committed by TVA to obtain the job-creation benefits of these projects. Of course, we expect that the local organizations will collect on any loans which they might make. Funds that are eventually returned to TVA by the local organizations at the end of each project will then serve to offset the total cost to the Federal Government of conducting the SOCC program.

COMMUNITY PREPAREDNESS

Question. The budget justification indicates that TVA provided assistance to the State of Tennessee's litter control program. What is the justification for using Federal appropriations to undertake work normally funded in State budgets? How much will be allocated to this type work in 1983?

Answer. TVA does not seek to undertake work normally funded in State budgets. TVA makes available, upon the request of State governments and State agencies, its special knowledge and expertise where State resources are not available. TVA was requested by the State of Tennessee to participate in four workshops for local officials participating in the State's litter grant program. TVA made presentations and lead discussions on solid waste management alternatives for rural areas such as recycling and convenience center collection. Tennessee has requested similar participation by TVA in fiscal year 1983.

Question. The response states that the State has requested the same level as last year. Do you actually anticipate expending that amount in fiscal year 1983?

Answer. Yes. One TVA staff member will make presentations and participate in each of four State-sponsored workshops to be held in Jackson, Nashville, Knoxville, and Chattanooga, Tenn. No TVA funds are provided to the State of Tennessee, but approximately $700 worth of staff time will be devoted to this effort.

Question. Does the 1984 budget include similar funds—if so, how much?

Answer. No funds are allocated for this activity in fiscal year 1984; however, TVA will cooperate with State governments to share its specialized knowledge and expertise when requested.

Question. The 1984 budget projects a $140,000 increase over the 1983 budget level. Provide a specific breakout of how this increase will be used.

Answer. The increase of $140,000 in the community preparedness budget will be used to expand TVA's technical assistance to communities in solid waste management from a level of $370,000 in fiscal year 1983 to a level of $510,000 in fiscal year 1984. Local governments in the valley have identified solid waste management as their top governmental services problem. The increased funding will be used to advise communities in such areas as (1) establishment of source separation and recycling projects; (2) correction of landfill operational problems; (3) establishment of convenience centers; and (4) upgrading of collection systems.

Question. Also provide for the record a breakout of how much will be allocated to new initiatives, along with a brief justification for each.

Answer. The community preparedness budget proposes no new initiatives in fiscal year 1984.

TOWNLIFT COMMUNITY IMPROVEMENT

Question. What criteria and selection process are used in the allocation of townlift community improvements funds?

Answer. (1) A community interested in downtown revitalization must request TVA assistance in providing plans for a townlift process; (2) communities are selected for townlift technical assistance based on an assessment of local capability to implement plans growing out of the townlift process; (3) the community completes a questionnaire intended to identify community needs, capabilities, and commitments of financial resources and local leadership; (4) TVA staff assigns weights to the question responses and gives priority for townlift assistance based on weighted scores; and (5) in the implementation of these projects, TVA provides these communities with technical advice and assistance. TVA funds are not provided to communities to implement townlift plans.

Question. What is the justification for using Federal funds to improve the efficiency, functional, and competitive nature of business?

Answer. TVA's townlift program provides technical assistance to small communities which have made a commitment to revitalizing central business districts where many of the communities' small businesses are located. For these smaller communities, the need to make efficient or continuing use of existing local public investments is increasingly important. Abandoned business districts and the costs of extending services to new areas create a compounded burden to the local taxpayer significantly offsetting new local revenues.

Townlift results include new and expanded businesses, a stronger local tax base, and expansion of housing opportunities in and adjacent to the business district. An efficient and functional town provides the kind of environment that promotes existing business and is attractive to new industry.

Question. The 1984 budget includes $940,000 for these activities. Provide for the record a list showing where and for what purpose these funds will be used.

Answer. In 1984, townlift assistance will be provided to 30 communities in developing and implementing townlift projects. The TVA funds are for technical assistance to be provided by TVA staff in the fields of economics, community planning, engineering, architecture, and landscape architecture. Townlift emphasizes self-help, and in 1984 is expected to result in more than $5.6 million being spent by local governments and private entities for implementation.

The 32 communities identified for townlift assistance in 1984 include the following:

Alabama: Florence, Moulton, Guntersville, Hamilton, and Double Springs. Mississippi: Oxford, West Point, Louisville, Houston, and Tupelo. Kentucky: Franklin, Auburn, Paducah, Mayfield, and Wingo. North Carolina: Black Mountain, Marshall, Canton, Asheville, and Robbinsville. Tennessee: Waverly, Manchester, Jackson, Woodbury, and Ashland City. Georgia: Dalton, Rossville, Sommerville, Blue Ridge, and Blairsville. Virginia: Appalachia and Abingdon.

Question. Give a one-sentence description of the type of activity on each of the townlift projects mentioned in the response.

Answer. Identified below are the 32 communities in which townlift assistance will be provided in fiscal year 1984. Current project objectives are:

Florence, Ala.—Population 37,500: TVA staff will serve on the local task force for commercial revitalization to encourage building rehabilitations through a city-sponsored financing program.

Guntersville, Ala.—Population: 7,000: Emphasis will be placed on forming a merchants' organization, developing a marketing strategy for new and existing downtown businesses, and providing architectural assistance for building rehabilitation.

Moulton, Ala.—Population 3,197: Assistance will be provided in developing a merchants' organization, encouraging business recruitment, and promoting adaptive rehabilitation of downtown structures.

Hamilton, Ala.—Population 5,100: Technical assistance will focus on developing a marketing/merchandising strategy for downtown through a new merchants' organization.

Double Springs, Ala.—Population 1,100: Project objectives will include developing a merchants' organization and commercial revitalization through infrastructure redevelopment and business recruitment.

Dalton, Ga.—Population 20,939: Design and implementation assistance will be furnished to the Downtown Dalton Development Authority which will provide for the adaptive reuse of the town's railroad depot. Preliminary design assistance will also be given for the adaptive reuse of other commercial structures.

Blue Ridge, Ga.—Population 1,376: Assistance will be provided to the Blue Ridge Community Improvement Association in developing a downtown traffic flow plan and retail marketing program.

Summerville, Ga.—Population 4,878: TVA will assist in traffic planning, the rehabilitation of building facades, and retail analysis.

Rossville, Ga.—Population 3,749: The townlift committee will be assisted in implementing townlift plans for redevelopment of the main business area using local funds.

Blairsville, Ga.—Population 400: Assistance will be given in planning adaptive reuse of the county courthouse in town and rehabilitation of the facades of downtown businesses.

Franklin, Ky.—Population 7,738: Technical assistance will include planning adaptive reuse of downtown buildings, urban landscaping, and developing downtown parking plans.

Mayfield, Ky.—Population 10,705: An economic analysis will be developed for use in new business recruitment, urban transportation planning, and the expansion of downtown housing opportunities.

Paducah, Ky.—Population 29,315: Technical assistance will include working with the downtown development organization (Growth, Inc.) to initiate a downtown trolley service; restoration planning of historic structures for commercial use; and the expansion of downtown housing opportunities.

Wingo, Ky.—Population 700: Technical assistance will include coordinating the implementation of a downtown parking and landscaping plan. The city has approved $90,000 for this project.

Auburn, Ky.—Population 1,467: TVA will provide land use planning assistance to reduce the local flooding problem. TVA will also provide urban landscaping design assistance. The town and local garden club have committed $7,000 to this project.

Louisville, Miss.—Population 6,700: Technical assistance will include planning downtown sidewalks with handicap access, parking, urban landscaping, building rehabilitation, and commercial revitalization.

Oxford, Miss.—Population 13,900: Technical assistance will be provided in the adaptive commercial reuse of abandoned structures, upper floor commercial development, and in developing a marketing plan for the downtown area.

West Point, Miss.—Population 8,811: Technical assistance will be provided in downtown beautification, new business recruitment, and developing a marketing strategy for local merchants.

Houston, Miss.—Population 3,747: Technical assistance will be provided in developing a merchants' organization, building rehabilitation, and developing a marketing strategy.

Tupelo, Miss.—Population 23,805: Assistance will be provided to aid local efforts to stimulate private-sector investments in a commercial neighborhood within the central business district where many minority-owned businesses are located.

Black Mountain, N.C.—Population 4,083: Site development and building restoration plans will be developed for 27 local businesses, expected to result in private expenditures of over $200,000; technical assistance will be provided in implementing a $500,000 package of downtown public improvements; and assistance for the growing local tourism industry will be continued.

Marshall, N.C.—Population 900: Assistance will focus on the design of a landscaping plan and on storefront improvements within the downtown area.

Canton, N.C.—Population 4,631: Assistance will address adaptive use of existing urban buildings and spaces, including design for conversion of a vacant hotel into a housing complex for the elderly, and redesign of downtown space for use by senior citizens residing in the area.

Asheville, N.C.—Population 53,281: Assistance will be provided to local efforts to stimulate private-sector investments in a commercial neighborhood within the central business district where many minority-owned businesses are located, and to develop physical design suggestions that will better link this neighborhood to the rest of the downtown area.

Robbinsville, N.C.—Population 1,370: TVA will assist in the organizational promotion of a newly reactivated downtown merchants association.

Ashland City, Tenn.—Population 2,329: A new townlift program will be initiated encompassing urban beautification plans, merchandising assistance to local merchants, and assistance in planning the adaptive reuse of commercial buildings for housing purposes.

Jackson, Tenn.—Population 49,131: Continued support will be provided to the local townlift committee on plans for downtown beautification and building restoration.

Woodbury, Tenn.—Population 2,160: TVA will assist in developing an offstreet parking plan that can be integrated with the city transportation plan and in identifying alternative funding proposals for the plan.

Manchester, Tenn.—Population 7,250: TVA assistance will be provided to develop a sign improvement program for the city and develop plans for the removal of overhead utility wiring.

Waverly, Tenn.—Population 4,405: Assistance will aid in the implementation of downtown redevelopment plans through the identification of funding sources and organizational frameworks.

Appalachia, Va.—Population 2,418: TVA will provide assistance in the design of new facility for the town's only medical clinic and pharmacy which is being displaced by a State highway project: work with the developer to construct a new complex; and conduct an economic feasibility study in support of a $1.8 million community development program and related business expansion.

Abingdon, Va.—Population 4,381: Assistance will focus on historic preservation initiatives.

Actual activities may change slightly or be expanded, depending on local funding capabilities. In all cases, the engineering and design assistance will be limited to the conceptual stage.

FLOODPLAIN MANAGEMENT

Question. Are these projects evaluated against the normal principles and standard for flood control projects?

Answer. TVA carefully reviews all requests from local communities for technical and financial assistance for flood damage reduction projects. TVA will consider funding only those project elements which are clearly beyond local capabilities; cannot be funded from other Federal, State, or local sources; and are consistent with TVA's objective of promoting nonstructural solutions, wherever possible, to local flood problems. This review also determines whether the project is cost effective and meets all environmental considerations.

Question. In TVA's evaluation of proposals from communities for floodplain management, are you required to follow the principles and guidelines established for all water resources development activities or do you have your own guidelines for evaluation? In evaluating proposals, what economic and environmental impact analysis is done?

Answer. TVA's water resources projects will be evaluated in accordance with the principles and guidelines, effective July 8, 1983, issued pursuant to the Water Resources Planning Act. TVA technical and financial assistance to local communities for flood damage reduction projects supports mostly nonstructural floodplain management activities such as floodplain zoning and relocation projects not covered by the Water Resources Planning Act. The review of these requests includes the consideration of the potential effect of the proposed project on the environment in accordance with TVA's procedures implementing the National Environmental Policy Act. As part of the overall review of a particular request for assistance with such nonstructural floodplain management projects, TVA also determines whether the project is cost effective.

Question. Is TVA required to comply with NEPA and fish and wildlife laws and regulations in developing these projects?

Answer. TVA is required to comply with the National Environmental Protection Act and many other environmental laws and policies designed to protect the environment in the development of its projects. All TVA-assisted activities are planned and reviewed consistent with applicable environmental legislation and directives.

Question. Provide for the record a description of each project, including a display of estimated and cost benefits.

Answer. Until the flood damage reduction planning process now underway by these localities is completed, it is not possible to fully develop estimates of expected project costs and benefits. As stated earlier, TVA is considering funding only a portion of these proposed community projects. Best present estimates of potential TVA funding for fiscal year 1984 are $50,000 for Cullowhee, N.C.; $100,000 for Fort Oglethorpe, Ga.; and $100,000 for Maryville/Alcoa, Tenn.

Present program efforts have established the following preliminary proposals:

Cullowhee, N.C.—A computer-based ALERT automatic flood warning system would be installed to provide for evacuation of over 100 mobile homes located in high flood hazard areas. These mobile homes primarily house Western Carolina University student families.

Fort Oglethorpe, Ga.—While the exact nature of the proposed flood damage reduction project has not been determined pending completion of the comprehensive study of possible flood damage reduction measures, probable remedies could include levees, berms, detention basins, bridge modifications, selective floodproofing, or relocation/raising of existing structures above flood levels.

Maryville/Alcoa, Tenn.—This project would consist of development of a cooperative stormwater management program for the cities. As at Huntsville, Ala., this will allow the communities to make informed decisions regarding the expected quantities and impacts of flood and stormwater runoff from alternate land-use proposals within the watersheds.

PRESERVING FARMLAND PRODUCTIVITY

Question. The 1983 budget request for preserving farmland productivity was $387,000. The 1984 budget data shows a funding level of $1.9 million. How do you explain the difference?

Answer. The seriousness of soil and water conservation problems in the region dictates that increased program activities be conducted to help alleviate the situation. The $1.9 million includes an additional $1.25 million added to the budget through the continuing resolution. Language in the House Appropriations Committee report directed TVA to intensify its work on soil erosion and water quality. The $1.9 million also includes the base of $387,000 as shown in the 1983 budget and an internal reallocation of $250,000 to provide for more attention to this growing problem.

INTRODUCING HIGH-INCOME ENTERPRISES ON SMALL FARMS

Question. An increase of $106,000 is budgeted for introducing high-income enterprises on small farms. How will this increase be used? Provide for the record a list which shows where the new demonstrations will be located and a brief description of purpose.

Answer. The increase of $106,000 reflects an acceleration of intensive enterprise demonstrations. This shift in program emphasis is necessary to address severe problems facing farmers in the valley.

In western North Carolina and north Georgia farmers are faced with extremely limited resources. The average size of the farms is 94 acres, but more importantly, the average amount of cropland harvested per farm is only 15 acres.

TVA feels that intensive enterprise demonstrations of such crops as fruit, shrubbery, and feeder pigs will better address farmers' needs. For instance, the feeder pig demonstrations offer a special opportunity for farmers to supplement their income, meet an expanding market, and to take advantage of new swine research now available. Specifically, we will establish 54 additional feeder pig production demonstrations in western North Carolina and 22 new demonstrations in north Georgia.

PRESERVING FARMLAND PRODUCTIVITY

Question. Provide for the record a tabulation showing where and for what purpose the $1.9 million was used.

Answer. Reducing soil erosion is essential for future sustained agricultural production in the region. In some areas of the Tennessee Valley region, such as west Tennessee and much of Mississippi, serious erosion problems exist on about one-fourth of the land. Other valley States also are experiencing serious problems. Of the 27.4 million acres of land in farms in 201 valley region counties, about 3 million acres of prime farmland have serious erosion problems.

We initiated accelerated projects in 1979 in cooperation with USDA agencies, land-grant universities, and State and local organizations to help solve the problem. The funds added by the House Appropriations Committee and internal budget adjustments will help us reach more farmers and expand the amount of land treated for soil and water conservation. The additional funds have permitted us to expand the soil and water conservation programs underway in Tennessee, Mississippi, and Kentucky, and have accelerated the new soil and water conservation program initiated in 1983 in north Alabama. And in cooperation with USDA's Food and Agriculture Councils in the seven valley States, we have begun efforts to coordinate conservation programs on a regional basis. Secretary of Agriculture Block has asked TVA to coordinate the targeted-area approach with the councils which will serve as a national demonstration on multiagency approaches to soil and water conservation.

We have also increased cooperative research with land-grant universities in the valley region. Emphasis is on developing new technology for conservation tillage.

The fiscal year 1983 program is administered according to the scope of the problem in each of the States. The breakdown of expenditures is Tennessee, $731,000; Alabama, $279,000; Mississippi, $512,000; Kentucky, $291,000; North Carolina, $63,000; and Virginia, $11,000; for a total of $1.9 million.

RAILROAD TANK CAR REPLACEMENT

Question. The budget request for 1983 included $1,225,000 to purchase 23 new tank cars, yet the 1984 justification indicates that no new tank car purchases are to be undertaken in 1983. Can you explain why the replacement tank cars will not be purchased as planned?

Answer. The plan to replace our obsolete tank car fleet began in 1979 on the basis that new cars would be delivered on a schedule that would replace existing cars which have to be removed from road service. (Cars that are over 40 years old cannot be utilized for commercial operations.) When the purchase plan was initiated, a leadtime of 24 to 27 months was required from the time an order was placed before the cars were delivered. In 1981, however, as the national economic picture changed, tank car manufacturers were able to build and ship cars much quicker. In 1982, 66 new cars were delivered. This delivery of 66 cars in 1982, plus 32 received in 1981, provided 98 new cars which were sufficient to maintain TVA's fluid fertilizer technology introduction program through 1983. Starting in 1984, TVA plans to purchase about 10 cars per year until a total of 200 cars are on hand, thus completing the replacement of the remaining cars as they become obsolete. The 1983 funding for tank car replacements was shifted to a promising suspension fertilizer project.

SUSPENSION FERTILIZER UNIT (UAN/UAS 36-0-0 AND 29-0-0-5S)

Question. The 1983 budget data did not include a request for a suspension fertilizer unit (UAN/UAS 36-0-0 and 29-0-0-5S). However, the 1984 budget justification shows $1,732,000 for this unit in 1983. Please explain what authority TVA used to provide this funding allocation.

Answer. The initial request for funding for this project came in the 1982 budget request under the heading high-nitrogen suspension unit (28-0-0-5S). Additional funding was requested in the 1983 budget. Further development work in the pilot plant revealed that the optimum grade for urea-ammonium sulfate (UAS) suspension is 29-0-0-5S. It was also proven in pilot plant work that a highly concentrated urea-ammonium nitrate (UAN) suspension (36-0-0) was feasible and desirable. Since a major portion of the processing equipment needed for the two processes was the same, TVA decided that the two processes should be combined to save on total facilities costs and, therefore, both of these new products could be produced in the same facility. The overall project was retitled suspension fertilizer unit—UAN and UAS (36-0-0 and 29-0-0-5S). Combining the two processes to utilize considerable common equipment initially costs more than the original high-nitrogen suspension (28-0-0-5S) unit but it is more cost effective than building two separate facilities. It will allow us to accelerate introduction of 36-0-0. The total estimated cost for the combined unit is $2,320,000 while the original funding request for high-nitrogen suspension 28-0-0-5S unit was $1,472,000. A separate UAN suspension unit would have cost $2,200,000, thus a savings of about $1,350,000 was achieved by combining the units.

Question. What source of funds was used for this work?

Answer. Partial funding ($872,000) in the TVA request for 1983 was approved for the high-nitrogen suspension unit (28-0-0-5S, grade later increased to 29-0-0-5S) as explained in the previous question. Because earlier-than-anticipated delivery of railroad tank cars in 1982 allowed TVA to meet its 1983 shipping requirements, funds provided for tank cars ($860,000) were shifted to the suspension fertilizer unit.

ENERGY-EFFICIENT FERTILIZER PROCESS FACILITY

Question. TVA is requesting $1.1 million for major engineering work and purchase of long-leadtime equipment for a demonstration facility to produce fertilizers by an energy-efficient process. What is the total estimated cost of this demonstration facility and where will it be located? Provide a summary of the schedules for completing this project.

Answer. The total estimated cost for the facility is $2,860,000. The facility will be located in an existing granular fertilizer demonstration unit in TVA's National Fertilizer Development Center, Muscle Shoals, Ala. Some equipment which had been used in another fertilizer granulation process can be incorporated into the proposed demonstration, thereby decreasing the facility cost.

Our schedules call for engineering work to start in October 1983 and to extend through February 1985; construction is scheduled to start in January 1984 with project completion in June 1985.

Question. Has all development and proof-of-principle test work been completed?

Answer. Laboratory and bench-scale work has been completed and a pilot plant has been built and operated to demonstrate the viability of the process. The basic design parameters for the demonstration plant have been established, but additional development work is needed to fine tune the process from extended runs and to determine the best operating parameters for the demonstration plant prior to start of construction. The development work will be completed by mid-1984 which is consistent with the plan laid out in the budget.

Question. What is the total estimated engineering cost and the total cost for long-leadtime items?

Answer. The estimated engineering cost is $555,000 in 1984 plus $456,000 in 1985. The total cost for long-leadtime equipment items is $545,000 for purchases in 1984. Continuing costs in 1985 are $1,760,000, primarily for installation work, for a total project cost of $2,860,000.

Question. Provide a detailed breakout of the future budgetary requirements by major activity.

Answer. The information follows:

[In thousands of dollars]

	1984	1985	Total
Process equipment and materials	247	293	540
Building		393	393
Piping	80	188	268
Electrical and instrumentation	218	430	648
Engineering	555	456	1,011
Total project cost	1,100	1,760	2,860

ECONOMIC BENEFITS

Question. What are the potential economic benefits to the fertilizer industry? Has TVA explored the possibility of cost sharing this demonstration project with the fertilizer industry?

Answer. We estimate potential annual benefits to be $1.2 million for this process. The facility will demonstrate TVA's pipe-cross reactor in connection with the drum granulator to produce ammonium polyphosphate and urea ammonium phosphate fertilizers, with or without sulfur. This process is energy efficient compared to conventional processes and utilizes the lowest cost form of sulfur.

The technology offers important advantages. Several granular fertilizers can be made without using any fossil fuel for drying the products. Due to lower shipping cost for solids than for liquid phosphoric acid, the granular materials will be advantageous as low-cost phosphate intermediates for conversion to fluid fertilizers in small plants near the point of application. The polyphosphate content of the solids will improve the quality of fluid fertilizers, increase the nutrient content, and increase production rates. The process will also make possible the use of low-cost sulfuric acid to supply sulfur, a secondary nutrient needed to be added to soil in a growing number of agricultural areas. The process can easily be retrofitted to many commercial granulation plants, thus demonstration of its merits should lead to rapid adoption with quick realization of benefits by both farmers and industry.

As with previous developments, industry is expected to share in the cost of demonstration and introduction of this new development. TVA charges the industry as close to the market price as possible for experimental fertilizers.

In the whole process from R&D through demonstration and introduction, TVA has found that R&D is only a small part of the total cost of bringing technological innovation into the marketplace. Industry contributes the additional cost associated with working with the product, including special equipment, experimentation, and market introduction. Considerable investment is also needed on the part of industry to construct commercial size plants based on TVA-developed technology and to develop the market fully.

ENERGY-EFFICIENT FERTILIZER PROCESS FACILITY

Question. Is TVA considering cost sharing on the demonstration with the private sector? If so, when and at what levels?

Answer. This demonstration refers to the pipe-cross reactor. The complete program will be conducted in two phases: For the in-house demonstration plant (phase 1), TVA is providing all the financial support. Once the fertilizers produced by this plant (ammonium polyphosphate and urea ammonium polyphosphate) are accepted by the industry and the market is established, the fertilizer industry constructs and operates the plants (phase 2) to produce these fertilizers completely at their expense.

Replacements and Improvements

Question. The budget includes $976,000 for plant replacements and general support items compared to $386,000 in 1983. Provide a list for the record which shows how the budget request will be allocated and what work is to be accomplished.

Answer. The information follows:

[In thousands of dollars]

	1983	1984
Plant replacements:		
Replace heat exchangers—ammonia plant		105
Air agitation equipment—north end	54	67
Subtotal	54	172
General chemical facilities:		
Uninstalled equipment additions	233	240
Preliminary design studies for future construction	60	90
Rehabilitation of property transferred	31	30
Steam system improvements		129
Modernize chemical stores warehouse	138	133
Remote readout for truck scales		40
Standby coal-handling equipment		90
Replace roofs—engineering lab and pilot plant		52
Chemical construction stores stocking	-130	
Subtotal	332	804
Total plant replacements and general facilities	386	976

Question. Under the general chemical facilities: (1) Preliminary design studies for future construction; what are you currently working on and are there any new starts in the design stage? (2) Steam system improvements; what is the problem and will it take additional years of appropriations to solve? (3) Remote readout for truck scales and standby coal hauling (handling) equipment; provide more justification for undertaking these improvements.

Answer:

(1) Preliminary design studies for future construction are temporary accounts set up to accumulate preliminary engineering charges (drawings, studies, cost estimates) prior to final authorization of work. These charges are transferred to projects after approval is received. Current active preliminary design study accounts are as follows:

—A new energy-efficient fertilizer process (in preliminary design stage—new start in fiscal 1984).

—System to return steam condensate from various points to the boilerhouse as an energy conservation measure.

—Study to determine feasibility of optimizing the ammonia plant operation and efficiency to increase production capacity by eliminating present plant obstacles (in preliminary design stage; new start in 1984).

—Study on rehabilitation of the main warehouse for equipment and materials.

—Design study of feasibility of modifying the existing APP suspension facility to allow production of a new fertilizer (12-32-0-3S APPS).

—Fluid fertilizer storage facility (in preliminary design stage; new start in 1984).

—Energy conservation opportunities—studies and calculations to determine feasibility and savings/investment ratios for energy conservation throughout the plant.

—Studies to identify facilities needed to use solid MAP in TVA processes in lieu of phosphoric acid when it is cost effective to do so.

(2) A considerable portion of the NFDC steam distribution system is 1918 vintage. A survey made of the entire steam distribution system identified modifications and corrections needed as energy conservation measures. Changes requiring capital expenditures should be completed in 1984.

(3) Remote readout of truck scales is a labor-saving item to cover the purchase and installation of electronic readout of truck scales capability in the clerk's office. Presently, the clerk has to go from the office to read the scale each time a truck enters the scale. This wastes a considerable amount of time and money. Approximately $10,000 per year will be saved with the installation of the remote readout. This will result in a payback period of 4 years.

For the standby coal-handling equipment, installation of a bucket elevator to feed coal into the feed bin for the boiler is planned. It will allow coal feed by front-end loader when the coal-handling equipment fails. The current combination dray-conveyor-elevator in use was installed in 1918. Spare parts are not available on the market. One manufacturer estimates that in the event of failure, it will take approximately 3 months to fabricate bucket replacements. The estimate for in-house fabrication and installation is 14 days, working 24 hours a day.

Based upon the most optimistic outage time and assuming one outage per year, the requested standby coal-handling equipment could provide a saving of $42,000 annually (the use of coal versus use of natural gas during the outage). In addition, savings in overtime work for fabrication and installation would amount to another $16,000. Total estimated annual savings by installing the standby coal-handling equipment is $58,000, or a payout of 1.6 years based upon total investment.

MAJOR RESEARCH AND DEVELOPMENT ACTIVITIES

Question. The budget request for basic and exploratory research for new breakthroughs in fertilizers is increasing from $477,000 in 1983 to $676,000 in 1984. Explain briefly what type of work is undertaken with this funding, the criteria and selection process used in determining what work will be funded, and how the $676,000 will be used.

Answer. This funding is for exploratory or investigative research. It is the area of work preliminary to establishing research projects that would be funded under major project activities. Funding in this area can be applied to any promising work that is consistent with the mission and objectives of the national fertilizer development program. Before any exploratory work is initiated, it is approved by management to insure that the work is appropriate and that the potential benefits can justify the expenditures. If initial research is promising, the work is again reviewed before a project is established to see that the potential payoff from the work continues to be attractive.

Major emphasis in the increased level for 1984 will be in the area of improving the efficiency of use of nitrogen fertilizers, which is our highest priority effort. Particular emphasis will be on new fertilizers and fertilizer management practices which can be applied in reduced tillage agriculture which is increasing in importance.

Other areas in which we are giving high priority for initiation of research include: (1) Decreasing the energy required to produce, transport, and apply fertilizers; (2) finding more efficient ways to process U.S. phosphate rock into fertilizer, with increasing emphasis on the use of the lower quality materials of the future; (3) decreasing use of natural gas and oil in fertilizer production; (4) avoiding environmental problems resulting from production and use of fertilizers; (5) solving problems related to deficiency of secondary and micronutrients, with particular emphasis on finding economical ways to supply sulfur to crops; and (6) continuing to contribute to basic knowledge of chemical and physical properties of fertilizer raw materials, intermediates, and products.

Question. Provide more detailed information on the criteria used in the selection process.

Answer. When a researcher has an idea which he or she believes merits research studies, a technical suggestion is submitted to a TVA research committee comprised of selected research managers, researchers, and a patent attorney. Criteria used by the committee to evaluate the idea are:

(1) Does the proposed product fit an agronomic or industry need? (2) Is the proposed process chemically feasible? (3) Do the preliminary economics appear promising? (4) Would the product and process be environmentally safe? (5) Does it fit the mission and objectives of TVA's national fertilizer program?

If the committee judges the idea to have merit, it recommends exploratory research be undertaken within specific limits. (It may also recommend initiation of patent procedures.) If the initial results from the research are promising, the responsible research manager will submit a project proposal. The project proposal is subjected to both peer and management review before approval. Once a project is approved, funding is requested.

AMMONIA-FROM-COAL PROCESS, DEVELOPMENT AND TESTING

Question. What accounts for the increase from $4.3 to $6 million in the development and evaluation test operation related to the ammonia-from-coal process?

Answer. The $6 million for development and evaluation of test operation will provide for a reasonably comprehensive test program in 1984. The $4.3 million funding level for 1983 did not permit achieving the desired amount of test demonstration for developing technical and economic data for the industry.

Question. What portion of the cost overrun on the process gasifier did Texaco pay for? Does the gasifier now operate as planned in the specifications? When is development testing scheduled to be completed?

Answer. Texaco funded modifications to the plant in the amount of $1 million. The gasifier now meets design gas composition and rate as specified. Development testing is scheduled to be completed in 1985.

Question. What was TVA's portion of the overrun? Is your statement that "the gasifier now meets design gas composition and rate as specified" mean that it operates as planned in the specifications (as asked in the original question)?

Answer. Modifications to the gasifier were totally funded by Texaco, and the cost does not appear on TVA's books. A separate contract was negotiated between Texaco and the engineering contractor for this work.

Although operation has been limited, the gasifier portion of the plant meets or exceeds all contract specifications. However, the gas treatment portion of the plant, for which Texaco had no responsibility, did not meet specifications. Recently, modifications were made by the contractor to correct this. Additional plant operation will be required efore we can be satisfied that the gas treatment portion of the plant can meet specifications for sustained periods. This should be completed in fiscal year 1983.

MURPHY HILL COAL GASIFICATION PLANT

Question. What is the current status of TVA's coal gasification plant?

Answer. Since March 1981, TVA has been actively pursuing equity participants for the coal-to-methanol project with the aid of Kidder, Peabody & Co., Inc.

A private consortium, with Kidder, Peabody as its agent, applied to the SFC's first solicitation in March 1981 and to its second solicitation in June 1982. Just recently the SFC shifted it from the second solicitation to the third. The consortium is seeking a combination of loan and price guarantees.

TVA has completed the conceptual and preliminary engineering for the project with the aid of C. F. Braun, the architect-engineer, and GKT, licensor for the Koppers-Totzek (K–T) gasification process. The design is now focused on a plant which would convert approximately 5,000 tons of coal into more than 1 million gallons of methanol per day primarily for use as an octane enhancer in motor gasoline. The current design has been optimized to reflect the needs of the market, the coals available from the consortium members who intend to supply the coal, and experience from K–T plants operating overseas.

TVA completed its environmental impact statement in the summer of 1981 and initiated site preparations shortly thereafter. These activities are now complete. The site is now rough graded with the construction water holding ponds, the barge causeways, and the construction barge slip being essentially finished. Local access roads are also being improved. TVA has applied for all the permits needed to begin construction. Only the air quality permit to construct has not yet been issued.

The project schedule and future expenditures by both TVA and the consortium depend on progress in completing the consortium and on negotiating the necessary contracts.

Question. When was application first made to the Synthetic Fuels Corp. for funding? Why hasn't this project been selected for further review or funding? What is the next step as far as the Synthetic Fuels Corp. is concerned?

Answer. The first application to the SFC was made by the North Alabama Coal

Gasification Consortium on March 30, 1981, under the SFC's first solicitation. The project passed the maturity review but did not pass the March 1982 strength review. The consortium reapplied in June 1982, under the second solicitation and passed both the maturity and strength reviews. In December 1982, the consortium entered into negotiations with the SFC in order to obtain a letter of interest which would aid the consortium in obtaining the additional equity required. As a result of difficulties associated with determining the total amount of price guarantees required and other factors, the negotiations lapsed. On April 13, 1983, the SFC board decided to move the project into the third solicitation. It is anticipated that the SFC will reconsider the project's maturity and strength at its May 26 board meeting. If the project passes these tests, the consortium would be able to begin negotiations again.

Question. What is the timetable at SFC for the third solicitation?

Answer. The SFC has not yet provided us with a schedule for the north Alabama project under their third solicitation. The project passed the maturity and strength tests at the SFC's May 26 board meeting, and we were given until August 15, 1983, to complete the equity formation. In the event that the project fails to meet this date, the project could apply for the appropriate targeted solicitation. The SFC has not yet announced a schedule for those targeted solicitations.

SEARCH FOR ADDITIONAL FINANCIAL PARTNERS

Question. Discuss in some detail what TVA has done over the past 18 months to attract additional financial partners?

Answer. In March 1981, TVA and Kidder, Peabody Co., Inc., a major Wall Street investment firm, began the search for equity participants in the project. Two firms—C. F. Braun and Air Products & Chemicals, Inc.—were recruited during the spring of 1981. In the summer of 1982, three more firms were added—Raymond International, Houston Natural Gas, and Peabody Coal. Each of these firms has a current or potential business interest in the project. During the past 2 years, TVA and Kidder, Peabody have contacted a large number of firms with potential interests in the project and have met with nearly 100 major domestic and foreign firms in this regard. Most of the meetings involve a detailed 2- to 4-hour presentation on the technical, marketing, and financial aspects of the project. They are preceded by extensive written and phone communications. The response to these presentations has paralleled the national economic and energy climate. Current efforts are focused on firms which might supply equipment and/or services to the project and on chemical/energy firms which might operate the plant and market the product. Several firms have the project under active consideration.

CURRENT STATUS OF FINANCIAL ASSISTANCE

Question. How many participants does TVA have and what are the general terms and conditions of the financial agreement?

Answer. There are five consortium members in the coal-to-methanol project: C. F. Braun; Air Products & Chemicals, Inc.; Houston Natural Gas Corp.; Raymond International, Inc.; and Peabody Coal Co. They represent half of the equity required by the project. As a result of the efforts by the consortium members, they would hope to form a project entity which would undertake the construction and operation of the project. To reach this objective, the consortium members would have to draft and execute agreements among themselves establishing the project entity, an agreement for financial assistance from the SFC, and an agreement with TVA to purchase its interests in the project. At this time, such agreements have not been negotiated or drawn.

Question. How many additional participants do you feel are necessary to make this joint undertaking viable?

Answer. Each of the five firms now in the project have discussed providing 10 percent of the project equity required to build the plant; therefore, another 50 percent is needed. A firm interested in operating the plant and/or marketing a significant fraction of the plant output would probably assume a larger share of the equity than the existing firms. An additional two or three firms would probably be required to complete the consortium. The likelihood of attracting additional equity partners is not good in view of the current uncertainty over future oil prices.

MURPHY HILL COAL GASIFICATION PLANT

Question. What work is planned for 1983 and 1984 and how much will be spent on the project?

Answer. The current TVA program is focused on developing the market for fuel methanol, adding new consortium members, advancing the engineering in three areas to a level comparable to the gasification unit, and making preparations for detailed design, construction, and operation. There will be no detailed design, equipment procurement, or work onsite until there is significant progress on consortium completion and SFC negotiations.

The fleet test program now underway at Muscle Shoals is proving to be a focal point for gathering sound data on the use of methanol/cosolvent blends in gasoline. TVA has entered into a cooperative agreement with the Atlantic Richfield Co.—developers of oxinol. The program is being reviewed by GM, Ford, Southwest Research Institute (DOE's contractor), EPA, and others to insure that the necessary data will be gathered. Extensions of the present test program may be needed to meet the long-term materials compatibility questions raised by the auto manufacturers. Limited testing of a vehicle utilizing straight methanol is planned. The overall effort is aimed at establishing the viability of the fuel methanol market.

The equity search is being conducted by Kidder, Peabody and TVA personnel as described in previous questions.

The third major activity involves the methanol synthesis unit, the tail gas treatment unit, and the fly dust boiler. Although TVA and contractor engineers have been assessing alternative designs for these units and have narrowed the choices, final selections and engineering contract awards have not yet been made. TVA plans to make these decisions shortly so that the engineering on these units can be brought up to the same level of confidence as the main gasification process units.

The fourth activity encompasses ongoing engineering work in areas such as computer model development, design optimizations, control philosophy, construction and operations planning, and environmental monitoring planning.

The rate and timing of obligations and expenditures depend on progress in negotiations with the SFC and in completing the consortium. At this time, staffing and ex-penditures are at a stable level reflecting continued effort in areas already underway. Once sufficient progress has been made in the key areas noted above, activities, staffing, and expenditures will be increased to support transfer of the project to the consortium and preparations for plant construction.

The 1984 President's budget reflected all of the funds being obligated in fiscal year 1983 based on project transfer this fiscal year. However, because of delays in consortium formation and the SFC's recent action to place the project in its third solicitation, it is not expected that the transfer will occur before mid-fiscal-year 1984. The funding pattern shown below reflects this delay.

[In thousands of dollars]

	Prior years	1983	1984	1985	Total
Obligations	62,182	27,818	35,000		125,000
Expenditures	61,386	28,614	35,000		125,000

IMPACT OF LOWER OIL AND GAS PRICES

Question. What impact has recent reduction in oil and gas prices had on the economic feasibility of the project?

Answer. We continue to believe that methanol will be attractive as an octane booster, thus offering the most economic way of using synthetic fuels produced from Eastern United States coals. However, the recent drop in oil and gas prices has made the economic feasibility of all synthetic fuels projects far less certain. It has brought into question the assumption that synfuels just needed a little nudge from Government to make it a commercial venture. The national security justification for synfuels remains the key justification, and it has heightened in light of recent events in the Middle East. The Federal Government, rather than consumers, generally may now have to pay for this security since the projected lower market prices for fuels may not cover the full costs of producing them from synfuels.

The impact on the north Alabama project has been to change the requested price guarantees from insurance to expected price subsidies. The lower expected market prices thus make SFC help essential. And this and all other synfuels projects will require more Federal financial support than previously contemplated.

Question. What has been the reaction of existing and potential partners?

Answer. The primary concern of the existing consortium members and potential new members is the market price for the methanol. During the past 4 months, perceptions about future prices and inflation have moved steadily downward. The cost of producing the product has remained relatively constant. The viability of the project now depends on financial support from the SFC.

MURPHY HILL COAL GASIFICATION PLANT

Question. Is there a likelihood of losing any of the existing equity partners?

Answer. On the basis of discussions with the existing partners subsequent to the SFC's decision to shift the project into the third solicitation, we expect them all to stay with the project for the next several months. If the project is unable to meet the SFC's conditions or negotiations are not successful, it is quite possible that one or more partners will cease to participate actively. There is real concern that the SFC's targeted solicitation may prove less flexible or acceptable to the existing partners than the current solicitation.

Question. If you assume the project is approved by June, what would be TVA's funding requirements for the remainder of 1983 and for fiscal year 1984?

Answer. In light of the April 13 action by the SFC board, moving the project into the third solicitation, the only approval action SFC could take by June would be to allow the project to begin detailed negotiations again. Based on past experience, it would not be reasonable to expect a letter of intent before the end of the fiscal year. Such a letter would be needed before any buildup in activity, staffing, and expenditures could begin. The funding pattern presented below reflects these assumptions. However, if a decision to begin the buildup were made in June, an additional $5 to $10 million would be expended in fiscal year 1983.

[In thousands of dollars]

	Prior years	1983	1984	1985	Total
Obligations	62,182	27,818	35,000		125,000
Expenditures	61,386	28,614	35,000		125,000

Question. TVA stated that $40 to $50 million would be carried forward to fiscal year 1984. Is that consistent with the testimony on the TVA carryover balance?

Answer. The table showing $35 million refers only to the coal gasification project. The $40 to $50 million figure reflects the possibility of carrying some Columbia funds forward as well.

Question. Does TVA still expect to expend all of the carryforward by the end of fiscal year 1984 as shown in the table we provided?

Answer. If the project is successful under the SFC's third solicitation, we would expect to obligate all of the carryover funds in fiscal year 1984. It is possible, however, that a few invoices would not actually be paid until the following fiscal year. If the project is not successful under the current solicitation, it will be necessary to reevaluate the desirability and pace of future expenditures. Under such conditions, it is possible that $10 to $15 million would be carried over into fiscal year 1985.

Question. How much would TVA obligate and spend?

Answer. As discussed previously, the funding required to support a project buildup and transfer in fiscal year 1984—the expected situation—is as follows:

[In thousands of dollars]

	Prior years	1983	1984	1985	Total
Obligations	62,182	27,818	35,000		125,000
Expenditures	61,386	28,614	35,000		125,000

Question. Provide for the record a tabulation which shows the annual appropriation requirements and anticipated obligations and expenditures through completion of TVA's involvement.

Answer. We would require funds as shown below. It is anticipated that if a letter of intent is obtained and the consortium completed by early fiscal year 1984, the project could be transferred in mid-fiscal-year 1984. It is anticipated, however, that outlays would occur throughout fiscal year 1984 as the existing contracts are completed.

	Prior years	1983	1984	Total
Appropriation	125,000			125,000
Carryforward		62,818	35,000	
Funds available	125,000	62,818	35,000	125,000
Obligations	62,182	27,818	35,000	125,000
Expenditures	61,386	28,614	35,000	125,000

REMARKS OF SENATOR SASSER

Chairman HATFIELD. I want at this time to defer to my colleagues for questions they may wish to ask you.

Senator STENNIS. Mr. Chairman, I am willing to defer to the other members here. I want to stay for the hearing and you will come back to me, I am sure.

Chairman HATFIELD. Thank you, Senator Stennis.

The Senator from Tennessee is probably the best TVA expert we have on this committee—we are very happy to have you here today, Senator Sasser.

Senator SASSER. Thank you, Mr. Chairman. You are very kind to say that, but quite frankly I think I would have to defer to my senior colleague from Mississippi, Senator Stennis. I would say that he probably has forgotten more about TVA in the years that he has been dealing with it than I know.

Senator STENNIS. Thank you, but I am not an expert.

Senator SASSER. I'm sure I'm not either. [Laughter.]

Chairman HATFIELD. None of us are experts I guess. [Laughter.]

These gentlemen before us are the experts.

Senator SASSER. Thank you, Mr. Chairman. I do want to welcome the members of the TVA board today and general manager. Let me say that at the outset, I am very pleased with the substantial progress that has been made by TVA and the board to establish a more cooperative working relationship with the elected representatives of the Tennessee Valley area. I think this board and TVA generally has taken some real steps over the past few months and years to be more responsive to the people of the Tennessee Valley.

I want to take this opportunity to commend them and congratulate them for that what is, I think, a new spirit.

Mr. Chairman, when I first came to the U.S. Senate and before these gentlemen were there, on a number of occasions I wrote letters to the TVA board. Occasionally, they weren't even answered. Then sometimes when they were answered, I got a cursory bureaucratic reply. I felt at that time, and still feel, that an elected representative of the Tennessee Valley area, or any area of the country, deserved a better reaction than that and we are certainly getting it now.

I think that is indicative of a splendid spirit of cooperation that I think bodes well for the future.

I also want to commend the board for their presentation and testimony today. I thought the video tape was excellent and was even better than the Joint Chiefs of Staff testimony, Senator Stennis. [Laughter.]

It appeared to me they really did their homework.

Mr. DAVID FREEMAN. Senator, we will settle for half of their budget. [Laughter.]

EMERGENCY EMPLOYMENT BILL

Senator SASSER. We have got a problem in the Tennessee Valley area that is deep-seated and is accelerating on us. That is the problem of unemployment. We have an unemployment rate in Tennessee of 13.7 percent. I don't know the rate in Mississippi. I am sure my distinguished senior colleague does. But I believe Alabama, which is served by the TVA, may now have the highest or second highest unemployment rate in the Nation.

In an effort to alleviate this terrible condition, TVA was provided $40 million in a jobs bill for TVA. And I would like to ask the board, or whoever is going to speak for the board today, maybe the general manager, how this $40 million to create jobs in the Tennessee Valley area is going to be utilized by TVA.

Mr. DEAN. Mr. Sasser, we have already put $10 million of that to work which involves jobs for about 600 people at our reservoirs, cleanup operations, and things that need to be done but that we haven't been able to do until this money came along. Mr. Willis, our general manager, has a more detailed breakdown he might want to discuss further.

Mr. WILLIS. Thank you, Mr. Chairman.

What we wanted to get at and quickly identify to put people to work were things to improve the physical condition of our facilities and enhance their value; in other words, those costly expenditure items we have not been able to get to through our regular budget. Those are the areas we identified and we did get $10 million, as the chairman said, of activity underway, largely in three areas—some work at Land Between the Lakes on improvement of campgrounds and roads that needed repair very badly, and some work on recreation areas at several reservoirs across the system. We will also work on cleanup of old facilities at our National Fertilizer Development Center that has been needed to be done for several years.

Our goal is to get about 2,000 people back to work with this money. We went after hiring folks whose unemployment benefits had run out as the first priority. We then tried to get at other people who are on unemployment right now and get them back to work very quickly.

We believe that we have been effective in setting up some fast administrative procedures and controls to get this underway. We are happy that 10 days after the jobs bill was signed, we had people at work. We think it is a very needed thing for the area of high unemployment and also does some needed things for TVA that we would not have been able to get at for many, many years. This will avoid having to spend money many years down the road that would have been a lot more.

Senator Sasser. I want to commend you for acting so fast. As I understand it, you are hiring new people. I think it is laudatory that you are trying to direct your hiring efforts to those who are unemployed and have been drawing unemployment benefits for some time. I might say that I saw a piece in the paper that indicated that you had thousands of applications for those 600 jobs; is that correct?

Mr. Willis. Yes, sir. I think we have had about 8,000 or 9,000 applications so far for these 600 jobs.

Senator Sasser. In addition to the 600 you have already hired, you are going to be able to hire another 1,400.

Mr. Willis. Or more. That is a rough number. Hopefully it will be more than that.

DEFERRAL OF EMERGENCY JOBS APPROPRIATIONS

Senator Sasser. I was distressed to see after we had included the $40 million for TVA in the jobs bill in order to try to alleviate the very terrible unemployment situation in the Tennessee Valley area that now OMB, and I suppose Mr. Stockman, are coming back and trying to defer that money. My information is that OMB will seek to reduce by $40 million the funding for TVA over the next 3 fiscal years, over the next 3 fiscal year periods.

I think this runs contrary to the spirit and intent of this jobs bill legislation, legislation that was supported by this administration and signed by the President. I want to assure the board today that I will oppose any budget amendment which is sent to the Congress from the administration the effect of which is to delete this $40 million or take it back in fiscal years 1984, 1985, and 1986. I think the administration or OMB is really trying to make Indian givers out of the Congress here if we are going to give it one year, then they come back and try to take it back in the next fiscal year.

ELECTRIC RATES

One of the laudatory actions of the TVA board was the recent decision to reduce electric rates. That is the first time in almost two decades that electric rates have come down. I think that is an outstanding achievement. It indicates that TVA is working hard to be more cost efficient in their operation. Of course, no doubt as you tighten your belts and try to make yourselves more efficient, I suspect there is also a little luck involved in being able to bring these rates down. But tell us the details of this rate reduction. I suspect the chairman would like to hear about that. He might want to take that back to the Northwest. It might reduce rates out there.

Mr. DEAN. We found at the end of the last fiscal year September 30, that we had somewhat over $40 million that we were able to use to offset future rate adjustments. Mr. Parris, our manager of power, is here today, and he has been in a belt-tightening mode. He has been trying to get by with as lean a shop as he can. Interest is a driving factor on our rates now because we are borrowing so much to complete the nuclear plants currently under construction.

The interest we projected was a couple of percentage points higher than we actually experienced. So the lower interest rates have helped us, and then also as the year went on we have had good hydro performance. The extra $40 million enabled us to reduce rates 10 per-cent for the month of March and these other various factors enabled us to reduce rates then for April through the end of the fiscal year by roughly 5 percent. We can give you a detailed breakdown for the record, Senator, if you would like to have it.

Mr. DAVID FREEMAN. Senator Sasser, if I could add one other factor that I think is worth mentioning, because it might be relevant to the situation in the Pacific Northwest. We have financed conservation at TVA over the last 6 years. We have a strong enough conservation program so that we now build that into our projections. That may not yet be the dominant factor accounting for the rate reductions. It is one factor that has now achieved sufficient strength to help us in our rates.

You can build a kilowatt with roof insulation a whole lot faster and cheaper than any other way. We have reached over 700,000 homes that were built in the era when we had 1 cent electricity and the homes weren't weatherized. We found lots of them that were sensible then, but it is sensible now to finance the weatherization. We are very proud of that program. It is continuing.

Chairman HATFIELD. Do you anticipate a rate increase anytime later on in the year?

Mr. DEAN. Every year stands basically on its own feet. This summer our power people will look at their projections for fuel cost, sales, interest rates, and other costs for next year.

They will come to the board in July with a recommendation for the following year. We expect at this time that power bills next year will probably be at about the same level as they were before we put in the reduction for the last part of this year. That is a projection at this point.

Chairman HATFIELD. So, you do expect an increase in October?

Mr. DEAN. It would be an increase from where we now are, Senator, because of a temporary discount we recently placed into effect until the end of the year. We expect charges in October to be back up in the neighborhood of where they were before we put the discount in.

The reason for this discount for the 6-month period was that favorable conditions and cost-cutting efforts were resulting in better performance for the year than projected. Since it appeared that we would get more revenues than would be needed to meet our financial requirements, we were able to drop rates. That will get us to the end of the fiscal year 1983 and we probably will then have to go back in the neighborhood of the rates in effect before the discount went into effect.

I use the word "discount" because it is easier to understand. It is a short period of rate reduction.

Chairman HATFIELD. Thank you.

Senator SASSER. Thank you, Mr. Chairman.

I suppose we can pray for a lot of rain and lower interest rates.

Mr. DEAN. Don't pray for any right now, please, sir. We have got all we can handle down there at the present time. [Laughter.]

Give us a few days. We promise to let you know when we need it. [Laughter.]

I have been with Mr. Hatfield's friend from the Northwest who I met at a meeting up in Washington. They also have water running out of their ears.

COLUMBIA DAM, TENN.

MUSSEL CONSERVATION PROGRAM

Senator SASSER. Last year the committee provided report language concerning the Columbia Dam project. The committee expressed concern that TVA and other agencies involved in the mussel transplant program cooperate to expedite the mussel protection program.

What is the status of the mussel protection program and when do you anticipate being able to reinitiate work on Columbia Dam?

Mr. DEAN. I believe we will let Mr. Willis, our general manager, talk about that, Senator.

Mr. WILLIS. We have been working very successfully on this conservation program. It is really a two-part effort. One is to transplant one endangered mussel discovered there, and second, to improve the habitat for the mussel population in general in the Tennessee Valley region.

By last November, we had successfully completed the transplant of 4,000 of those endangered mussels from the Duck River to four other locations in the valley.

We are in consultation with the Fish and Wildlife Service now on determining the likelihood of success of the conservation program. It is their judgment as to whether it is successful or not. We believe it will be successful. Over the course of the summer, the likelihood of success will be evaluated, then we will have successfully completed that part of it if they agree.

Another thing we are doing as a part of that conservation program is looking at corrective measures to improve the overall water quality of mussel habitat.

It threatens water quality now and maybe in the future. We are working with several other agencies in doing that. In general, we think that program is coming along well from our standpoint. We just have to wait and get the judgment of the Fish and Wildlife Service in the late summer.

Senator SASSER. Do you have any idea, Mr. Willis, when you can begin work again on the Columbia Dam?

Mr. WILLIS. If the Fish and Wildlife Service agrees with our judgment, this would allow major construction and land acquisition to resume, subject, of course, to available funds, although final closure of the dam would still depend on a successful demonstration.

BROWNS FERRY NUCLEAR PLANT

Senator SASSER. On January 16, TVA declared an alert at the Browns Ferry nuclear plant.

Mr. Chairman, I would like to include in the record two articles concerning this occurrence.

Chairman HATFIELD. They will be included, without objection.

[The information follows:]

[The Wall Street Journal, Jan. 17, 1983]

TVA DECLARES ALERT DUE TO LEAK AT REACTOR IN ATHENS, ALA., AREA

(By a Staff Reporter)

KNOXVILLE, Tenn.—The Tennessee Valley Authority declared an alert at the Browns Ferry nuclear power plant near Athens, Ala., yesterday.

A small but otherwise undetermined amount of radioactive water leaked into the Tennessee River, the TVA said.

The alert was declared at 8:30 a.m. CST when the cooling system of one of the plant's three reactors was stopped because of at least one leak, said Louis Gwin, a spokesman for the TVA, which operates the plant. The reactor now is "stable," he said.

Browns Ferry plant, one of the TVA's two nuclear power facilities, has three 1.1 million-kilowatt reactors. All came into operation between 1974 and 1977.

The leak occurred either late Saturday night or early Sunday morning at the Unit 3 reactor, which was recently closed for routine maintenance. Even when the unit isn't operating, Mr. Gwin said, water is circulated to cool the reactor. Of the unit's four cooling loops, he said, two were closed for maintenance, leaving the No. 3 and No. 4 cooling loops available.

Around midnight Saturday, he said, a leak was detected in loop No. 3. The No. 4 loop was then turned on. About eight hours later, what was thought to be a leak was detected in the No. 4 loop. It was closed. The reactor was then cooled by diverted condensed steam.

If the steam diversion should fail, he said, other means of keeping the reactor cool exist. The reactor "isn't overheating," Mr. Gwin said.

He said the TVA believes the leak, or leaks, occurred in the heat-exchange part of the cooling system, where cool river water passes around heated reactor. The leak lasted for about 20 minutes, Mr. Gwin said, and consisted of a small amount of mildly radioactive water. "The measure was less than a millirem," he said.

Late yesterday, plant operators began to suspect that the leak detected on the fourth cooling loop was actually a remnant of the earlier leak from the third loop. If that was indeed the case, Mr. Gwin said, then the fourth loop would be restarted and the alert called off.

The TVA follows a four-step system of emergency, beginning with level No. 1, "unusual event," and increasing in seriousness to level No. 2, "alert"—yesterday's level—and then to level No. 3, "site emergency," and level No. 4, "general emergency."

Yesterday was the first time the TVA ever declared an alert at Browns Ferry. It was also the first time it had stopped all four cooling loops in a reactor.

In March 1975, a serious fire broke out in a room at Browns Ferry containing reactor system-control cables, resulting in the closing of one reactor for several months.

Last week, the federal government fined the TVA $40,000 for a dozen security violations at Browns Ferry over the last year.

The three Browns Ferry reactors tie into the TVA's power grid, which covers 80,000 square miles in Tennessee, Kentucky, Alabama, Mississippi, Georgia, North Carolina and Virginia.

[From the Energy Daily, Washington, D.C., Jan. 19, 1983]

ALERT AT BROWNS FERRY

Gerald Paulk and Ken Clark, and doubtless quite a few others, did not partake last Sunday in America's weekly ritual television feast, watching the Dallas Cowboys shrug off the Green Bay Packers, or the Miami Dolphins dispatch the San Diego Chargers. Paulk, the Nuclear Regulatory Commission's senior resident inspector at the Browns Ferry nuclear station, spent the day in the control room of Unit 3, watching the reactor operators track down a leak in the plant's residual heat removal (RHR) system. Clark, the NRC's chief public information officer in Atlanta, spent most of the day on the phone with reporters.

Browns Ferry Unit 3, a 1,067-megawatt boiling water reactor operated by the Tennessee Valley Authority in Decatur, Alabama, was taken out of service on January 12 for maintenance on the reactor feedwater pumps—a five-day job, TVA figured. While in cold shutdown, the operators were using the RHR system to remove decay heat from the core. Last weekend, however, Unit 3's RHR system was not fully operable. The system consists of four heat exchangers—A, B, C and D—cooled by water from the Tennessee River; the A and C heat exchangers share a common injection valve and common radiation alarm, as do the B and D heat exchangers. The valve serving the A and C heat exchangers was inoperable, so decay heat from Unit 3 was being dumped through the D heat exchanger.

Just after midnight on Saturday, technicians took a water sample of the river water used for cooling and discovered "some [radio]activity," says an NRC spokesman. This was thought curious because there had been no radiation alarm, but the operators assumed there was a leak in heat exchanger D and switched plant cooling to B. At this point, it all was classified an "unusual event," according to NRC's crisis nomenclature. But around 8:30 on Sunday morning (Central time), radiation alarms sounded, leading operators to think there was a leak in the B heat exchanger as well. At 8:50 am, they shut down heat exchanger B and declared an "alert"—required by NRC regulations whenever the RHR system is completely down. (Both the utility and the NRC take pains to assert that TVA declared the alert because the RHR had been taken out of service, not because radioactive water had spilled into the Tennessee River. TVA later estimated that it lost about 208,000 gallons, containing 15 millicuries of radioactivity—"not a health threat," by NRC's reckoning.)

With the RHR system out of service, operators switched Unit 3 cooling to the main condenser; if that hadn't worked, they could have tied into the Unit 2 RHR system. During the day, TVA technicians did a pressure test on heat exchanger B and found that it was not leaking after all. This forced them to conclude that the radiation alarms at 8:30 that morning were spurious, belatedly reporting the 208,000-gallon spill from the D heat exchanger much earlier. Having judged the B heat exchanger free of leaks, the operators reverted to dumping the decay heat through it, and declared the alert over at 7:17 pm (CST).

The affair was probably less serious than the Nuclear Regulatory Commission staff's decision last Thursday to propose a $40,000 fine against TVA for apparent security violations at Browns Ferry. The fine was prompted by an incident on December 16, when a visiting TVA employee gained access to the Browns Ferry "protected area" (the area encompassed by physical barriers to which TVA is supposed to control access) without being seen or stopped by guards. NRC noted, however, that this was not the first such violation. James O'Reilly, head of NRC's regional office in Atlanta, warned TVA management that "the repetitious nature of security violations illustrates the need for special attention to the management of your nuclear security organization and program." TVA has 30 days to pay the fine or file a protest.

Senator SASSER. Please tell us what happened at Browns Ferry which led to the alert and what is TVA doing to assure that no futher accidents similar to that one at Browns Ferry will occur again in the future.

Mr. DEAN. Mr. Parris, manager of power, is best qualified to address that.

Mr. PARRIS. I am Hugh Parris, manager of power for TVA. That occurrence began on July 16 when plant operators noticed an increase in the radioactivity on the release cooling water circuit of the residual heat removal exchanger.

This was a very slight increase, not enough to set off alarms for radioactivity in the cooling water at all. The plant operators immediately shut off those heat exchangers in order to assure that no radioactivity reached the river.

Under plant operating specifications, the valving out of those RHR heat exchangers when the unit was in a shutdown mode—as it was then—is a reportable incident to the NRC. It was that event that initiated the first stage site alert.

To prevent a recurrence of these types of events, we will strive to improve cooling system integrity as best we can. It is, I think, also important to note that during this alert, there were never any activity levels in the river cooling water side of the systems that were anywhere near the amounts that have to be reported.

RADIOACTIVE WASTE STORAGE

Senator SASSER. There was an article in the Chattanooga Times on January 14, headlined, "TVA Expects Big Problem." The story outlines that major storage problems may be expected at Browns Ferry.

Tell us what problems TVA expects with nuclear waste disposal at Browns Ferry and what problems you might expect at your other nuclear powerplant sites.

Mr. DEAN. I will let Mr. Parris talk about that.

Mr. PARRIS. That particular article, as I understand it, as I recall it, was related to low-level radioactive waste generated at Browns Ferry.

As the committee knows, there have been a number of issues associated with low-level radwaste disposal. The passage of the Low-Level Radioactive Waste Disposal Act and the progress made toward regional compact agreements suggest that the problems experienced in the past will be resolved. But in the interim period, disposal space availability still must be considered.

Several disposal sites have been closed. We now have only two sites available to us: one at Barnwell, S.C., and another in Hanford, Wash. Like all waste generators, we have restrictions on the amount that we can ship to Barnwell, and during the fall of last year we were making some shipments to Washington.

We are now shipping to Washington on a fairly regular basis and we are also using our full allotment of space at Barnwell. If we are able to continue, we think our inventory of low-level radwaste at Browns Ferry should decline somewhat this year.

You also would be interested to know that we have built four modules for low-level radwaste storage at Browns Ferry with provisions to build more. We have in those modules about a year's worth of storage space. At the time of that particular article, we had not received the license to use it.

We have now received that license. We have some storage modules at the Sequoyah plant. We are investigating a number of measures to reduce the volume of waste and to assure that those modules are used only as a last resort, but they are available for interim use until the compact arrangements are complete. They can also be used in the event that we need to.

Mr. DAVID FREEMAN. I would like to add this thought. I want to assure you that all three members of the board take the safety of these nuclear plants as their personal responsibility. I recall that you and I visited Browns Ferry together and you have been down there many times.

We go over each of these issues in person with TVA's independent nuclear safety staff and with Mr. Parris and the line managers.

We believe that the safety of Browns Ferry is steadily improving because of the dedication of the people and their knowledge that the managers of the TVA today are judged on safety just as much if not more so than on productivity in their service and in their promotions.

It is a tough problem, of course. But we are all working at it with great diligence and we think we are making ever-steady progress.

ADDITIONAL QUESTIONS FOR THE RECORD

Senator SASSER. Thank you, gentlemen.

Mr. Chairman, I have additional questions which I would like to submit for the record. I am going to have to excuse myself and go to the Budget Committee.

Thank you.

Chairman HATFIELD. Thank you, Senator.

We will include them in the record for their response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR SASSER

EMERGENCY JOBS BILL

1. Question: The Congress provided $40 million in the "Jobs Bill" for TVA. How will these funds be utilized?

   Answer: The legislation (P.L. 98-8) appropriated an additional $40 million for the Tennessee Valley Authority Fund for the construction, maintenance, repair, and renovation of TVA facilities. Accordingly, TVA selected projects that would maintain or improve the condition of its facilities and resources, enhance their value, lengthen their duration of service, or avoid more costly future expenditures for necessary maintenance, restoration, construction or repair. To provide jobs immediately, $10 million of TVA's appropriation has been allocated to enhancing the value of TVA lands and resources--cleaning up reservoir and recreation areas, maintenance and construction of roads and bridges on dam reservations and Land Between The Lakes, campground expansion, and cleanup of facilities at NFDC. These projects alone will employ approximately 600 previously unemployed individuals.

   In response to Congress' desire that Jobs Bill funds be used to maximize the immediate creation of new jobs, TVA plans to implement the balance of its jobs projects within the next three months. Taken collectively, these TVA-administered employment projects will provide employment opportunities to more than 2,000 individuals throughout the Valley in connection with various projects lasting from two months to two years.

   TVA's goal is to minimize the cost and red tape necessary to get unemployed people working again. Hiring criteria have been established which give priority to those living in the immediate vicinity of the jobsite who have been unemployed for at least 15 of the 26 weeks immediately preceding enactment of the Jobs Bill. Particular preference will be given to those individuals who meet the above criteria and whose unemployment benefits have expired.

   In addition, health and safety guidelines and guidelines for hiring women, minorities, and the handicapped have been put into place. Wherever possible existing TVA administrative policies and procedures are being applied to Jobs Bill activities in order to expedite program implementation.

   TVA will closely monitor Jobs Bill projects and provide additional reports to Congress on job program activities, including the work performed and the obligations, expenditures, and employment benefits realized.

2. Question: The Office of Management and Budget may soon send to the Congress a budget amendment for fiscal year 1984 which would reduce the request for TVA by the same amount of the funds provided in the "Jobs Bill." I would like to ask TVA what the effect of such a budget reduction would have on the 1984, 1985, and 1986 TVA budget?

   Answer: As we have already stated publicly, adoption of this amendment would have severe impacts on those ongoing activities supported with appropriated funds. We were not consulted by OMB prior to their decision to propose the amendment. If we had been consulted, we would have pointed out that in TVA's opinion the intent of Congress by including TVA within the scope of the emergency Jobs Bill was not to substitute these facilities projects for TVA's basic program of resource management and development. For this reason TVA's Jobs Bill program identified projects that will improve the physical condition of its facilities, enhance their value, lengthen duration of service, or avoid more costly future expenditures for maintenance or restoration. In this sense the emergency jobs will accomplish needed and useful work for TVA, as well as contribute to the economic recovery of the region. The question is whether TVA would have performed this work in the absence of the emergency jobs appropriation. In the large majority of cases the answer to this question is no.

The issue is not whether these projects are useful or cost effective. It is simply their relative priority within TVA's projected level of appropriations for the next several years.

In fiscal year 1980, for example, TVA's annual budget for its appropriated programs (exclusive of coal gasification) was $162.5 million. In fiscal year 1984 TVA has requested $122.5 million. This represents a reduction of 25 percent in current dollars and 46 percent in constant dollars that take into account the effect of inflation. OMB budget ceilings for fiscal years 1985-1988 range between $111 million and $125 million.

Within this constrained level only the most urgent maintenance and repair work can be supported. Greater priority necessarily must be given to TVA's ongoing resource management and development programs--flood control, navigation, natural resources, economic and community development, fertilizer research and development, and agricultural resources development--to be carried on under the mandate of the TVA Act of 1933. In other words, recent budget ceilings have made it necessary to choose between a fully adequate facilities maintenance and repair program and keeping alive TVA's basic resource management and development programs. The TVA Board has chosen the latter objective.

In these circumstances there can be only one result of the Administration's proposal to reduce future annual appropriations requests by the amount ($40 million) of the emergency Jobs Bill: In 1984, 1985, and 1986 TVA's basic resource management and development programs must suffer, forcing TVA layoffs in the hundreds and abandonment of ongoing TVA programs.

RATE REDUCTION

3. Question: Tell us the details of the rate reduction.

Answer: During a review in February of costs and conditions affecting power system operations, it appeared that the rates, which had been established in August and which became effective in October 1982, would result in revenues for fiscal year 1983 being approximately $125 million more than necessary to meet projected needs. This reflected successful cost-saving efforts and unforeseen favorable operating conditions. In light of such projections, it was determined that rates should be temporarily lowered by about 5 percent during the last six months of fiscal year 1983, which it was projected would result in total revenue collections for the year being about $125 million less.

In addition, we also approved a power credit applicable for March power bills as the means of returning $44 million set aside for return to customers from funds collected from sales last year. This resulted in a reduction of about 10 percent in bills for that month.

4. Question: What is the future prospect of electricity prices in the future?

Answer: The simplest and most straightforward way to describe the current outlook is to say that TVA customers in 1984 will likely be paying approximately the same for electricity that they were paying in 1983 prior to the one-time credit in March 1983 and the six-month reduction that runs from April through September of this year. In other words, these recent rate reductions can be viewed as a "bonus" that reflect the favorable operating conditions of 1982-1983, as well as improved management of the power system.

MANAGEMENT AND EFFICIENCY

5. Question: In January of 1980 the TVA received a management report from Booz-Allen and Hamilton on the operation of the Office of Power. The following month TVA received another self-generated management report from

Theodore Barry and Associates on the Office of Construction. I would also ask the Board to briefly summarize the activities which have been undertaken as a result of these two management reports.

Answer: The most credible evidence of progress resulting from implementing the recommendations is found in steps taken by TVA over the past six months that favorably affect electric bills. The Board recently approved a power credit applicable for March bills, to return to consumers approximately $44 million of the revenues collected from sales last year. This resulted in a reduction of over 10 percent in bills for that month. The Board has also reduced rates approximately 5 percent for the period April 1 to September 30, 1983. A turnaround of this dimension would not have been imagined when Booz·Allen and Theodore Barry made their initial management recommendations in 1979.

We recognize, of course, that good fortune--especially ample rainfall and lower than predicted interest and inflation rates--played an important part in this turnaround, just as the record drought of 1980-1981 and skyrocketing inflation and interest rates were critical factors in the rate increases during the earlier years. The cost of generating power will always be subject to certain natural and economic forces over which TVA managers have little control. However, the many management improvements made it possible for TVA to capitalize fully on the good fortune of the past year. These improvements by TVA management are still taking place and their benefits will be with us for many years, regardless of the impact of external events. Major areas of particular significance are listed below.

No-Excuses Management. The most significant change arising from implementation of the Booz·Allen and Theodore Barry recommendations was a dramatic change in the management philosophy and approach of TVA managers at all levels. The change was one of holding individual managers responsible for results and requiring solutions to problems in order to achieve explicit operating objectives. This approach involves building management reporting systems that are timely and reliable and the personal involvement of hundreds of TVA managers to set the goals against which performance can be measured.

Necessary Investments. Beginning in fiscal year 1978 the TVA Board began a long-overdue effort to upgrade the reliability and efficiency of TVA's coal-fired and hydropower generating plants. Through fiscal year 1982 some $256 million has been invested. Benefits worth some $50 million each year are now being achieved.

Efficiency in Generating Capacity. No subject has received more direct attention from the TVA Board and its top managers than the issue of scaling down TVA's nuclear plant construction program to reflect a realistic maximum demand for electric power during the next two decades. It appeared to some that any cut-back in the construction of new nuclear generating plants would seriously jeopardize the Valley's future economic progress. It is now clear that precisely the opposite was true: The costs of building excess generating capacity would be sufficient to make TVA's electric rates so high as to be noncompetitive with other regions, thereby stunting future economic growth. Painful as the decisions were for the TVA Board, there was no alternative in these circumstances but to cut back the nuclear construction program to a level that would support high economic growth in the forecasted range and eliminate capacity that clearly was in excess of these needs. As you know, this involved decisions starting in 1978 that have resulted in cancellation of four generating units and deferral of four units. Rates today are about 4 percent lower than if construction had continued. By 1990 rates will be about 23 percent lower because of the deferrals and cancellations if present load forecasts are realized.

Coupled with these decisions was TVA's determination to view energy conservation and load management as a relatively inexpensive source of electricity and to make the investments that would achieve these savings for individual customers and the power system as a whole. Increased capacity achieved through conservation and load management are purchased for less money than the cost of completing the central station generating plants canceled or deferred. To date, these investments have provided TVA with about 800 megawatts of reduced winter peak demand that will not have to be met through more expensive construction of nuclear plants. The cost of this "new" capacity has been $160 per kilowatt compared to the estimated cost of about $2,800 per kilowatt for the canceled Phipps Bend Nuclear Plant. Given this cost-effectiveness, TVA considers additional investments in energy conservation and load management as the priority option to consider if additional generating capacity is needed in future years.

Strengthened Management Improvement and Internal Controls. Complementing and contributing to this greater efficiency in operations is a strengthened internal capability for management improvement and control. Creation of the Office of Audit and Evaluation in fiscal year 1982 has provided the TVA Board and top management with an independent internal audit capability that is linked to management improvement and program evaluation. When potential weaknesses in TVA's operations are identified through internal audits, there is immediately available management expertise to help line managers remedy the deficiency. For example, efforts are currently underway to improve the efficiency and productivity of standard maintenance activities at TVA's coal-fired steam plants and to strengthen controls over TVA property at construction sites and generating plants. The Audit Review Group meets about every six weeks to ensure that audit findings and management improvement recommendations are carried out.

TVA has also worked diligently to improve its corporate planning and management reporting activities at all levels to provide managers with the information needed to do a better job. Examined from a broader perspective, it becomes clear that most of what has taken place at TVA during recent years has been adjusting management philosophy and operating decisions to the realities of a rapidly changing external world. Similar changes have been taking place in most other sectors of the U.S. and world economy, especially in relation to the supply and use of energy. What has not changed is TVA's historic commitment to run an electric system that can serve as a benchmark for others and that contributes positively to the economic and social well-being of Tennessee Valley residents.

An important factor in this effort was TVA's decision to seek the outside counsel of Booz·Allen & Hamilton and Theodore Barry & Associates in the manner described in this report and TVA's response to concerned committees in the Senate and the House. Of greater importance, however, was the timely recognition by TVA management that changes were necessary, coupled with the determination and courage to act.

OFFICE OF AUDIT AND EVALUATION

6. Question: Please tell us how much has been saved and summarize the cases which have been solved as a result of the work of the Office of Audit and Evaluation. I would also ask that you provide for the record a more detailed analysis of the work of this office.

Answer: TVA's Office of Audit and Evaluation completed 105 audits and 24 audit letters in support of various investigations during fiscal year 1982. Costs questioned totaled $9.7 million for the year. Nearly $9 million (93 percent) of the questioned costs have been recovered with an additional $312,000 settled through negotiations by TVA's contract administrators.

During fiscal year 1982, 21 major evaluations and management improvement projects were completed. The estimated nonrecurring (one-time) quantifiable benefits resulting from projects completed in fiscal year 1982 are $1,860,000. The estimated recurring annual benefits are $13,166,500. Another 27 projects were in progress at year end.

The benefits described reflect changes and efficiencies in operations as well as the recovery of payments in excess of allowable amounts. Many audits and evaluations result in recommendations to strengthen accounting and administrative controls or to change the strategy, policy, or implementation of a program. It is not always possible to quantify the benefits associated with those activities; but in terms of program effectiveness and internal control, the benefits are substantial.

Also, we would like to submit for the record a June 1982 report entitled "Organization and Management of TVA's Audit, Evaluation, Improvement, and Investigation Resources and Activities." This report provides a more detailed analysis of the work of the Office of Audit and Evaluation.

ORGANIZATION AND MANAGEMENT OF TVA'S AUDIT, EVALUATION, IMPROVEMENT, AND INVESTIGATION RESOURCES AND ACTIVITIES

Prepared by

Office of the Manager
of Audit and Evaluation

Knoxville, Tennessee

June 1982

ORGANIZATION AND MANAGEMENT OF TVA'S AUDIT, EVALUATION, IMPROVEMENT, AND INVESTIGATION RESOURCES AND ACTIVITIES

Background and Introduction

The TVA Act of 1933 created TVA as a corporation and provided for the appointment of a Board of Directors to "direct the exercise of all of the powers of the Corporation" and to "provide a system of organization to fix responsibility and promote efficiency." Accordingly, the TVA Board of Directors (Board) has appointed managers to positions of defined responsibility and has worked with those managers in developing policies and procedures that would promote efficiency in TVA's operations and ensure an effective system of internal controls. Since its inception, TVA's systems of internal controls and program evaluations have developed and expanded concurrently with the development of similar management systems in the public and private sector of the Nation.

TVA's initial organization provided for a separation of the internal auditing functions from other corporate functions through the establishment of the position of General Auditor. Throughout TVA's existence, the General Auditor has maintained a functional relationship with the Board for purposes of reporting on matters requiring the Board's immediate attention.

Under the direction of the General Auditor, the Auditing Branch was initially responsible for audits of TVA's financial records in accounting offices and at field locations, for evaluating internal compliance with accounting and reporting procedures, and for conducting factfinding audits at the request of management. Audit evidence on indications or actual incidents of employee misconduct was turned over to the General Counsel for further investigation and appropriate action. Audits of contractor records were performed as required to verify claims against TVA and to determine contractor compliance with certain area development contracts.

By 1970 the Auditing Branch had begun to increase and train its professional staff for audits of an increasing number of cost reimbursement type contracts containing audit clauses. Commensurate with changes in the business world and in the auditing profession, the Auditing Branch began conducting operational audits of TVA activities selected with the advice of the General Manager. These operational audits were conducted by teams comprised of auditors and other TVA employees who had expertise in the particular areas of activities being reviewed. The general plan for these audits encompassed financial and compliance aspects, budgetary and expenditure comparisons, efficiency, and applicable management policies and procedures- the primary features of expanded scope audits.

During the years 1976 through 1978 the Auditing Branch established separate staffs specifically devoted to audits of TVA's existing and planned computer systems, operational audits, and audits of an increased number of cost reimbursement contracts.

Program evaluations were initiated in TVA in 1972 with primary emphasis on improving TVA program effectiveness. These evaluations were under the direction of the Office of the General Manager, which provided guidance and qualitative controls for the evaluation and implementation planning conducted by the various program organizations. Primary improvements and recommendations addressed changes in corporate or program policies, program goals, implementation strategies, and operational objectives.

Corporate industrial engineering activities were introduced into TVA in 1974 to promote efficiency and economy in TVA's operations. Initially, emphasis was placed on major field work areas involving large expenditures of resources. Success of these evaluations in bringing about major improvements and cost savings led to the establishment of industrial engineering staffs located in the major field operations to maintain and upgrade established productivity improvements and to develop and promote additional improvements.

In 1979 the corporate industrial engineering function was expanded to provide capability for operational improvements in office-type activities and to provide internal management review and consulting services. Evaluations and improvement activities in the office-type operations achieve more efficient resource utilization in areas such as administrative and clerical support, logistical support, and managerial and professional services. The internal management review and consulting function promotes economy and efficiency through management reviews of organizational units and operating elements and by providing management consulting services to the managers of TVA's activities.

A corporate executive level Audit Review Group, independent of line operations, was established in 1981 to oversee and coordinate TVA's internal reviews and corrective followup activities. It plays a key role in the formal coordination of planning, reporting, and management followup activities and includes the participation of the Board in these actions.

In summary, TVA has been making significant improvements in both the scope and performance of its audit, evaluation, and improvement activities over the past 10 years. Major advances have been made in overall system controls and accountability within the past two years. Both the General Accounting Office (GAO) and Coopers & Lybrand have generally found TVA's capability for conducting independent internal audits to be sound; the fundamental integrity and honesty of TVA's system for conducting audits and program evaluations has never been questioned. But recent recommendations by GAO and TVA's independent auditor, Coopers & Lybrand, for improvement actions focus primarily on how TVA's resources could be better structured to carry out audit and evaluation functions. A subsequent reorganization has arrayed these functions in a single office with the capacity not only to identify management problems, but also to analyze how and why they occurred and recommend procedures to correct them. This new entity, elevated to the corporate level in the General Manager's office, offers TVA a single organization in which problems are uncovered and analyzed, and solutions are recommended.

The reorganization effort involves upgrading the procedures for planning audits and evaluations, for conducting expanded scope audits, for making program evaluations, and conducting followup on the implementation of recommendations. The Office of Audit and Evaluation was the name chosen for the new management control vehicle.

TVA's System of Internal Management Control

TVA's internal control system is made up of standards, procedures, and controls on the operating offices and divisions; routine financial and performance reporting by the responsible decision units; and the auditing, evaluation, and investigative functions. Audit, evaluation, investigation, and identification of opportunities for management improvement are the primary responsibility of:

- Office of Audit and Evaluation;
- Office of the General Counsel;
- Audit Review Group chaired by the General Manager with participation by the Board (see figure 1).

In addition to the specific management functions, the Audit Review Group monitors effectiveness of the internal management control system and recommends priorities in its plan of work, develops recommendations on unresolved audit or evaluation issues for the Board, and makes recommendations for further improvement in the internal control system or its operation.

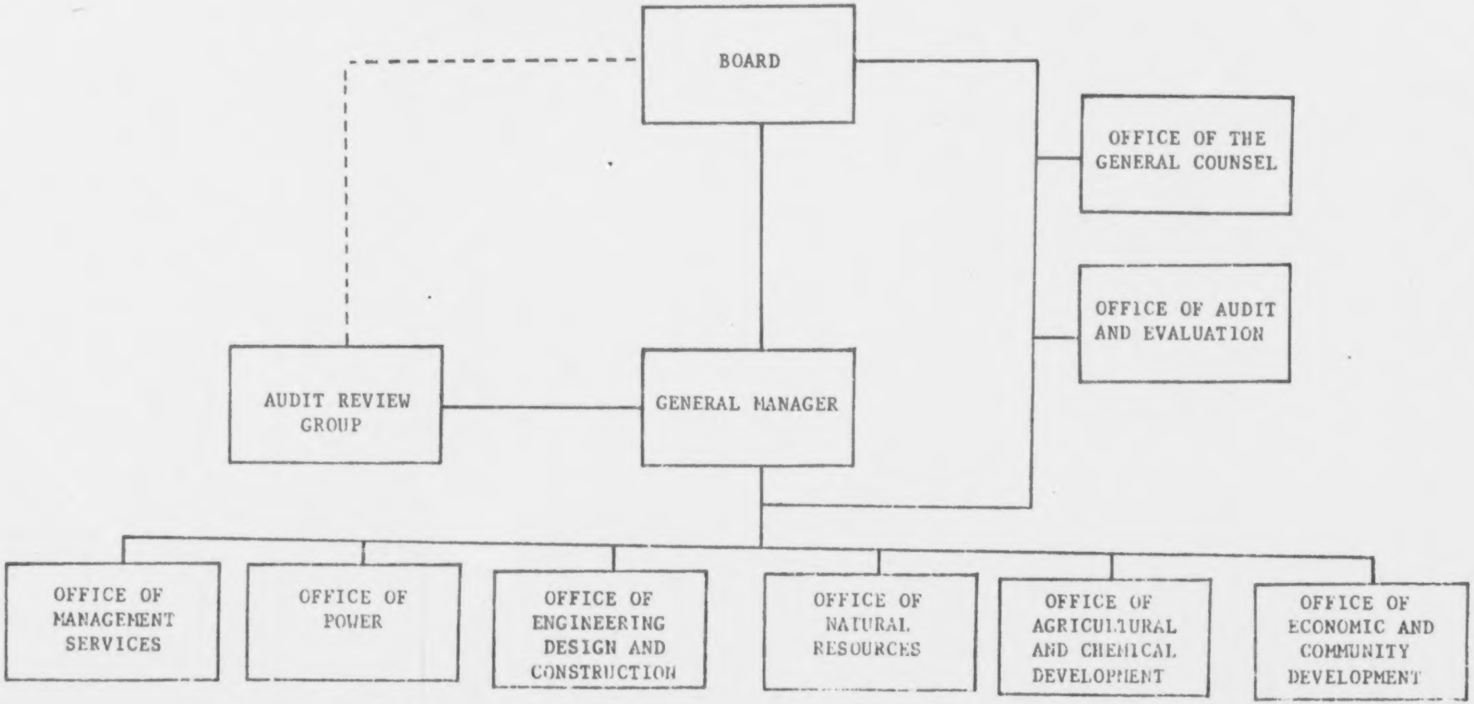
Crucial to maintaining effective management control is the involvement of the Board in establishing priority for audit and evaluations and ensuring that recommendations are followed up. The planning and followup procedures in this restructured system ensures that level of involvement.

The Office of Audit and Evaluation

The TVA Board created the Office of Audit and Evaluation to improve its processes for monitoring organizational performance, providing internal management control, and improving operating performance. Administratively, the Office of Audit and Evaluation is located in the General Manager's office but has both routine and exceptional reporting responsibility to the

Figure 1

ORGANIZATION OF INTERNAL MANAGEMENT CONTROL FUNCTIONS


BOARD
OFFICE OF THE GENERAL COUNSEL
OFFICE OF AUDIT AND EVALUATION
AUDIT REVIEW GROUP
GENERAL MANAGER
OFFICE OF MANAGEMENT SERVICES
OFFICE OF POWER
OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION
OFFICE OF NATURAL RESOURCES
OFFICE OF AGRICULTURAL AND CHEMICAL DEVELOPMENT
OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT

Board. The Board reserves to itself the final determination of disputed findings and recommendations made in audits and evaluations; and it delegates management responsibility for implementing adopted recommendations.

The Office of Audit and Evaluation consolidates corporate monitoring and improvement functions and provides the Board an improved means of managing these activities consistent with Board priorities. This office is the official arm of the Board for ensuring objective financial control. It conducts special purpose and expanded scope audits, program evaluations, and management reviews; and promotes and improves the efficiency and effectiveness of TVA's management, programs, and operations. The Office of Audit and Evaluation recommends to the Audit Review Group and the Board priorities in audit, evaluation, and improvement activities. Implementation of findings and recommendations are monitored and quarterly progress and completion reports are made to the Audit Review Group and to the Board by the Office of Audit and Evaluation. The office consists of two branches: the Auditing Branch and the Corporate Industrial Engineering Branch. Their functions follow:

Audit Function

The Auditing Branch, under the supervision of the General Auditor, is responsible for carrying out the corporate audit function within TVA. Audits of TVA's activities include accounting records and financial statements; accounting systems of internal control; records and operations of certain outside contractors for determining contract compliance; existing and new-developing computer systems for security, protection, and control. The branch also performs operational audits of TVA activities and makes special audits upon request. In the last fiscal year, the General Auditor issued 90 reports involving all areas of TVA's business. These reports questioned more than $4 million in costs of which $2 million have been recovered to date.

The Auditing Branch includes 41 professional employees: all these employees have experience and college degrees in accounting and related fields. Twelve are licensed certified public accountants; two are certified internal auditors; and one is a certified data processing auditor.

The General Audit Section audits certain functions within TVA for compliance with accounting procedures and management policy and to test the reliability of the accounting system. Year-end audits are made of the detailed reports supporting TVA's published financial statements and of the form and content of the Federal Energy Regulatory Commission and Power Annual Reports. During interim periods, audits are made on a test-check basis of the revenues and expenses of TVA programs, construction costs, plant and inventory records, payroll and leave records, systems of internal control, and the application of prescribed accounting procedures: and all cash accounts are reconciled. The General Audit Section prepares and maintains a file of abstracts for all receipts contracts for comparison with detailed billing records in the accounting offices.

The ADP Audit Section reviews and evaluates existing and new-developing computer systems from the standpoint of security, protection, and accounting and auditing controls. It revises, develops, and implements auditing techniques and programs to maximize the use of computers in the work of the Auditing Branch. It performs operational audits of computer centers and reviews organizational structure to ensure proper separation of duties and effect on controls over use of computer center resources and job accounting systems. It reviews the utilization and security of equipment and stored data, the programming and processing documentation, input and output validation, error correction, and scheduling procedures.

The General Contract Audit Section audits cost reimbursement contracts (not handled by the Western Uranium Audit Section) and all contracts other than coal, such as area development activities, trust funds, van pool project, and personal services. It performs preaward audits and advises contract administrators on accounting and auditing matters.

The Coal and Litigation Contract Audit Section audits cost reimbursement contracts for procurement of fossil fuels; reviews claims concerning gross inequities, contract terminations, defaults, and escalations; testifies for TVA in administrative and judicial proceedings and furnishes information to assist in the settlement of claims. The section performs preaward audits and advises contract administrators on accounting and auditing matters.

The Western Uranium Audit Section audits cost reimbursement contracts for procurement of nuclear fuels in the Western United States. It reviews and verifies accounting and financial data for purposes of determining the accuracy and reasonableness of accounting records of the contractors involved in nuclear fuel exploration, mining, and milling of uranium ore; the adherence to the terms of the contracts; and the protection of TVA's interest with regard to assets. This section performs preaward audits and advises contract administrators on accounting and auditing matters.

The Operational Audit Section reviews and evaluates specific segments of TVA activities for compliance with management plans and policies; applicable laws, regulations, and procedures; adequacy of controls; and the economy of operation or related matters. It conducts reviews, as requested, by the General Manager and others of specific segments of TVA's activities. It works closely with the Corporate Industrial Engineering Branch in areas related to management improvements, operational efficiency, and management consulting.

Evaluation and Improvement Functions

The Corporate Industrial Engineering Branch, under the supervision of the Corporate Industrial Engineer, is responsible for conducting a comprehensive evaluation and improvement program. The branch conducts program and management evaluations, and initiates improvement actions in TVA through the industrial engineering program and management consulting services. These activities are consistent with the general objectives of OMB Circular A-117. In fiscal year 1981, the activities of the branch resulted in more than $10 million in benefits to TVA.

The branch is currently composed of twenty-seven professional employees whose educational background and experience includes industrial engineering, industrial management, economics, management consulting, program evaluation, and business systems and operations. The resources of the branch, in conjunction with those of the Auditing Branch, are used in the conduct of expanded scope audits.

The Program Evaluation Section is responsible for conducting evaluations of TVA's programs to assist with management and policy decisionmaking. Program evaluations are formal assessments, through objective measurements and systematic analyses, of the manner and extent to which TVA programs achieve their objectives or produce other significant benefits. In the past, program evaluations were conducted by evaluation teams usually headed by a manager from the line organization that was responsible for the program. The Office of Audit and Evaluation now has lead responsibility for every program evaluation.

The Management Review and Consulting Section conducts management reviews on an organizational or functional basis and provides internal management consulting support to the Agency. Management reviews conducted by this section assess the effectiveness of organizational structures and relationships; operating procedures and systems; and work force requirements and utilization. These reviews result in recommendations to improve the quality and timeliness of operational performance, to increase productivity, to control costs, and to mitigate adverse aspects of TVA's operations. This section also analyzes specific problem areas, recommends improvement actions to the responsible manager, and provides management consulting advice.

The Field Industrial Engineering Section promotes efficiency and economy in TVA's major field operations and support areas. This is accomplished through improvement projects conducted by the section and by decentralized industrial engineering staffs working under the functional guidance of the corporate staff. Cost control, productivity improvements, work force utilization, and other problem-solving and management improvement work are targeted by this section. It also provides industrial engineering technical support to other related TVA activities.

The Office Industrial Engineering Section promotes operational efficiency and economy in TVA's office-type operations. It provides direction for the planning and achievement of productivity improvement and cost reductions in such operations throughout TVA. The section also accomplishes major improvements projects, develops technical procedures for the office industrial engineering function, and provides specific cost-reduction and problem-solving services for TVA managers.

The Office of the General Counsel

Conduct Investigations

TVA's Office of the General Counsel is responsible for investigating or directing internal investigations of all alleged violations of laws and regulations, or the gross waste of resources from whatever source received. These sources include TVA's Citizen Action Line and a telephone "hotline" direct to the General Counsel's office. The Office of the General Counsel also receives referrals from GAO of complaints received over the GAO Fraud Hotline. These systems provide employees and the public with ready access to complaint procedures, and encourage them to inform TVA about apparent improper conduct with assurances that no retaliatory action will be taken against them for doing so. Every allegation received (including anonymous complaints) is recorded and fully investigated. If an investigation indicates generic management problems, the General Manager, the Audit Review Group, and the Office of Audit and Evaluation are informed for further review and management action.

In the GAO hotline's first 35 months, TVA was referred only 29 of the total 7,006 referrals for the entire Government--approximately 0.4 percent of the total. (128 Cong. Rec. 5479; daily eb., Feb. 8, 1982; remarks by Senator Sasser.) TVA investigated and responded to each of those referrals.

The seriousness with which TVA views these investigations is shown by the number of disciplinary actions the Office of the General Counsel considered supportable in the last two years--134 in 1980 and 106 in 1981. The disciplinary actions TVA has taken generally exceed or equal those reported by many other agency Inspectors General (as reported in the Summary Report of Inspectors General Activities, FY 1981 II, by the President's Council on Integrity and Efficiency).

TVA's General Counsel has allocated the equivalent of three full-time attorney and investigator positions to conduct these investigations. In addition, the General Counsel uses the resources of the General Auditor and TVA's Public Safety Service in conducting investigations, as appropriate.

The General Counsel informs the appropriate United States Attorney or the FBI of any evidence of violations of Federal criminal law, as required by Federal law, and informs State and local law enforcement officials of evidence of violations of their criminal laws in accordance with TVA policy. TVA works with these agencies and assists them in conducting investigations of these matters as requested.

Since January 11, 1979, under the Civil Service Reform Act of 1978, TVA has referred to the Special Counsel of the Merit Systems Protection Board for appropriate action all allegations of political activity in violation of the Hatch Act by TVA employees.

Conduct and Ethics Counseling

TVA's Office of the General Counsel advises employees and TVA management on questions involving interpretation of TVA's conduct regulations or other applicable conduct-related laws to assist employees in knowing and fulfilling their ethical responsibilities. This includes giving written or oral advice on the applicability of TVA conduct regulations, Federal conflict of interest and other criminal laws, statutory restrictions on post-employment activities, the Hatch Act, and the use of Government vehicles for official purposes only.

Review of Financial Disclosure Reports

The General Counsel is TVA's Designated Agency Ethics Official under the Ethics in Government Act of 1978, and has the responsibility for reviewing Financial Disclosure Reports filed by all managers at grades M-8 and above (about 200 of TVA's top managers). The purpose of this review is to assure that no conflicts or potential conflicts of interest exist between the reportable financial interests of those managers and the duties of their TVA positions, and to advise managers on compliance with applicable laws. The Office of the General Counsel works with TVA offices and divisions in the review of Statements of Employment and Financial Interest filed under Executive Order No. 11222 by approximately 700 designated managers at grades M-5 through M-7 to assure that no conflicts exist at those levels.

Review and Advice on Audit Reports

TVA's Office of the General Counsel reviews audit reports prepared by the General Auditor and, as appropriate, initiates investigations, notifies the United States Attorney of any evidence of criminal violation, and gives its views on further action that appears to be necessary based on those reports.

Audit Review Group

The Audit Review Group (ARG) monitors Agency-wide audits, program evaluations, fraud, waste, misconduct, and management improvement efforts. It plays a key role in the formal coordination of planning, reporting, and management followup activities related to these functions. The members of the ARG are the General Manager, who serves as chairman, the General Counsel, the Assistant General Manager/Administration, the Manager of Audit and Evaluation, the Manager of Planning and Budget, the Comptroller, and the Director of the Public Safety Service. The three TVA Board members have been added as ex officio members of the Audit Review Group and will participate in its operations. In addition to managing the operations of the ARG, the executive secretary of the ARG is TVA's liaison on all investigations of TVA conducted by the General Accounting Office.

The ARG meets every six weeks to review problems identified in audits, evaluations, and other investigations, as well as corrective actions taken by line management. At each meeting, the members report on the latest developments in their areas and bring to the group's attention any management problems calling for resolution or further study. When appropriate, TVA managers whose operations are the focus of ARG attention meet with the group for discussion of the issues involved. In addition to discussing issues identified by each member, the ARG staff reviews incoming complaints from external sources such as the Citizen Action Line and referrals from the General Accounting Office and provides the members with this information. The ARG also reviews the annual management letter from TVA's external auditor. The group may request audits, evaluations, or other actions if unresolved generic problems are identified.

Each quarter, TVA's Directors will attend the ARG meeting to receive formal reports directly from each member and to provide overall guidance in the planning, setting priorities, and other management control actions related to the investigation, audit, evaluation, and improvement activities. The Manager of Audit and Evaluation determines the matters on which he reports directly to the Board. The General Counsel reports directly to the Board on legal matters.

The type of organizational arrangement and the delegation of responsibilities described above raises the functions of detection of fraud, waste, and error and the promotion of improvement actions to the highest reporting level in the corporation and makes these functions independent of TVA's line organization. Accordingly, the Board of Directors is alerted on a scheduled basis and can assist in resolving findings and/or other problems.

The following sections in this report focus on the integrated corporate process used in the planning of investigations, audits, evaluations, and improvements; in establishing priorities; and in following up on findings, recommendations, and improvement actions.

Planning

TVA's integrated corporate review process consists of three planning levels--the long-range plan, the annual plan, and specific project level plans required for individual audits, evaluations, and improvement activities. Each of these planning levels is described further below.

Long-Range Plan

The long-range plan is prepared to provide for systematic reviews of the entire corporate program and management system on not less than a five-year cycle and to ensure continuing dedicated efforts on improvement actions. Sensitive or vulnerable programs and activities are audited or evaluated as often as necessary to ensure adequate performance monitoring and fiscal and management accountability. This requires that the different TVA offices and divisions, projects, programs, and activities be audited or evaluated on a one-, two-, three-, or five-year cycle. A selective schedule of improvement efforts is also required. Some staff resources are scheduled to perform audits and evaluations of management issues raised in the current year by constituents, TVA management, the General Accounting

Office, or by congressional initiatives. Staff will also focus on improvement initiatives.

The long-range plan provides selected information for each of the five years on the planned work: (1) the basic areas planned for audit, evaluation, or improvement effort, (2) the probable objective; and (3) an estimated allocation of staff hours. This plan is updated annually, coordinated within the Audit Review Group, and submitted to the Board prior to the beginning of each fiscal year.

Annual Plan

An annual fiscal year plan establishes the priority of activities and serves as the operating plan for TVA's auditing, evaluation, and improvement activities. The plan is developed by the Office of Audit and Evaluation and formally coordinated in the Audit Review Group. Flexibility in the annual plan is achieved by using this same procedure to update the plan during the year in accordance with changed circumstances or new priorities. The annual plan translates the long-range plan into a definitive work plan providing the audit and evaluation categories, purpose, scope of work, and resource allocations. Every complaint regarding alleged employee misconduct or fraud is investigated by the Office of the General Counsel. The General Counsel apprises the chairman of the ARG of investigation findings and these findings are available to other ARG members.

Annual planning activities are categorized as follows:

1. Expanded Scope Audits.
2. Audits.
   a. Financial and Compliance.
   b. Automated Data Processing (ADP).
   c. Operational.
   d. Contracts.
3. Evaluations and Improvements.
   a. Program Evaluations.
   b. Management Reviews and Management Consulting Services.
   c. Field Industrial Engineering Improvement Activities.
   d. Office Industrial Engineering Improvement Activities.

A number of factors are considered in developing and assigning priorities to the annual plan activities. The more important of these factors are:

1. The perceived adequacy of management system and controls.
2. Experience and results from prior auditing, evaluation, improvement, and investigation activities.
3. The dollar magnitude and duration involved.
4. Newness, changed conditions, sensitivity or vulnerability of individual programs or operations.

5. Management needs as developed in consultation with program and operating managers.

6. Coverage of audit/evaluation reports prepared by others (General Accounting Office, independent public accountants, etc.).

7. Congressional recommendations and legislation or regulatory requirements.

Audits, evaluations, reviews, and improvement projects are selected and priorities are assigned based on these important factors. A preliminary plan for the conduct of each project also is developed at this stage with an estimate of resource requirements. Resource requirements and scope of the activities planned in all of the audit and evaluation categories are accounted for. The annual plan is formally coordinated in the Audit Review Group and is submitted to the Board with the corresponding long-range plan prior to October 1 of each year.

Expanded Scope Audits--The Office of Audit and Evaluation selects those TVA program and operation areas where expanded scope audits will be performed and plans the necessary activities to accomplish the effort. These major audits encompass the three elements of expanded scope auditing--financial and compliance, economy and efficiency, and program results. This is consistent with the General Accounting Office publication, Standards for Audit of Governmental Organizations, Programs, Activities, and Functions (1981 revision). These three elements provide the users of the audit reports with full accountability of the programs or operational activities involved. An expanded scope audit is not always needed, nor always desirable. The following excerpt from the above referenced GAO publication affirms this consideration:

> An audit of a government entity may include all three elements or only one or two. It is not intended or even feasible or desirable that every audit include all three. The expanded scope audit should not be conducted routinely, but instead selected when it will meet the needs of expected users of the audit results.

Expanded scope audits will encompass the various audit and evaluation elements.

Audits--Audits are directed toward ensuring the continued integrity of TVA's resources and management systems. These audits range from single objective to multiobjective reviews that encompass some or all of the purposes discussed below.

Financial, ADP, and operational audits address broad management control purposes.

1. The soundness, adequacy, and application of accounting, financial, and operational controls.

2. Determining the extent of compliance with established policies, plans, procedures, and applicable laws and regulations.

3. Determining the extent to which TVA's assets are accounted for and safeguarded from losses of all kinds, including fraud, waste, and abuse.

4. Determining the reliability of accounting and other operational performance data developed within TVA.

5. Appraising the organizational performance in carrying out assigned responsibilities to identify actual or suspected conflict in corporate and program policies, or ineffectiveness or inefficiencies in programs that impede achievement of TVA goals. Appraisal results are coordinated with the Corporate Industrial Engineering Branch for planning and conducting management improvements to address problem areas.

Contract audits address specific TVA/vendor contractual compliance and accountability.

1. Determining the allowability, accuracy, and reasonableness of the contractor's reported costs and claims against TVA.

2. Reviewing the contractor's procedures that protect and provide for disposition of TVA-owned property or property acquired under the contract.

3. Reviewing the contractor's accounting systems and internal controls which should prevent wasteful or inefficient practices in the performance of TVA contracts.

4. Determining that objectives of the contract are being achieved efficiently and economically.

5. Providing advice on accounting and financial matters to contract administrators to assist them in negotiation, administration, changes, and settlement of contracts.

6 Determining the financial condition of contractors in default and their ability to pay damages to TVA.

The annual plan delineates the specific audits selected for accomplishment during the fiscal year to ensure that the criteria and current management objective is systematically considered in establishing priorities and developing the annual plan of work.

Evaluations and Improvements--Program evaluations, management reviews, and other improvement activities are included in this category and discussed below.

Program evaluations in the annual plan consist of those TVA program areas selected for a formal assessment through objective measurement and systematic analysis. Emphasis is on the manner and extent to which the programs achieve objectives or produce other significant effects. The goal is to assist program management and policy decision-making. This evaluation category examines TVA programs from the perspective of the effectiveness of achieving service delivery to users and impact on the targeted population external to the corporation. Also included are internal TVA functions or services that require close monitoring of effectiveness in program support, or involves management policy.

Management reviews or evaluations are formal assessments of the efficiency of corporate organizational, program, or functional operations. They include assessing the adequacy of organizational structures and relationships, operating procedures and systems, and work force requirements and utilization. As such, management reviews perform two basic functions--assessing the effectiveness of management systems performance and providing consulting assistance in developing more improved management systems. Thus, the end purpose of this activity is to design and achieve the implementation of more improved management systems and procedures.

Corporate consulting services are provided to TVA managers on issues or problems involving productivity, management systems, administrative procedures, control systems, and effective staffing. Such activities are normally short term and require minimal followup. However, consulting services regarding policies, strategies, or organization can often involve complex issues and can require both extensive analysis and significant project effort.

Field industrial engineering improvement activities address efficiency and economy in TVA's major field operations and support areas. This is accomplished through improvement projects which are both corporate directed efforts and efforts initiated by line managers within their areas of responsibility to improve the effectiveness or efficiency of TVA's operations. Individual projects may be part of a major effort with multiple projects strategically scheduled to accomplish phased improvement over time or may address a targeted improvement area which may be achieved through a single project. These efforts are planned and scheduled either through the initiative of the line manager or the Office of Audit and Evaluation.

Office industrial engineering improvement activities address efficiencies and economy in TVA's office-type operations. Office-type operations include activities involving administrative and clerical support, logistical support, and managerial and professional services. Improvements are accomplished through projects which are both corporate directed efforts and efforts initiated by line managers within their areas of responsibility to improve the efficiency or effectiveness of TVA's operation. Projects are planned and scheduled through the initiative of the line manager or the Office of Audit and Evaluation.

Specific Activity Plans--Each of the audit, evaluation, and improvement projects involving significant effort is planned in detail upon the initiation of the project to identify the major objectives, approach, activities, and schedule. These plans are revised to incorporate new activities or objectives that arise during the course of the evaluation.

Reporting and Followup

Reporting and followup of investigation, audit, and evaluation activities are designed to provide top management findings and recommendations of the completed activities, a system for monitoring progress in audit and evaluation performance, and in the implementation of previously developed and adopted recommendations. Specific policy or management issues or exceptions to achieving the planned program of work are highlighted in the report for top management attention.

Reporting the progress and outcome of investigations and management improvements are vital to the successful accomplishment of improvements. Two types of written reports are prepared:

- formal written reports filed on completion of the findings and recommendations used as a basis for management actions;
- quarterly management reports used by top management to monitor the status of specific investigations, audits, evaluations, improvement, and followup activities.

Formal written reports are prepared for each audit, evaluation, improvement project, and investigation, giving the results of the review and findings. Formal reports are issued promptly at the time of project completion for timely use by management. (Occasionally, written interim reports are prepared.) The reports are made available to officials with direct management overview or action responsibility, to the Board, and to the Audit Review Group. Reports contain descriptions of the scope and objectives of the audit, investigation, or evaluation. These reports also include descriptions of errors, weaknesses in controls, significant instances of noncompliance, and other deficiencies, as well as recommended actions to be performed by specific organizational elements. Those organizations audited or evaluated are required to either concur in writing or provide written basis for their disagreement.

Adoption of audit and evaluation recommendations is made after a thorough review and discussion by the managers responsible for corporate decision-making and implementation. Written reports provide top TVA and program management with an understanding of the situation, issues, findings, and improvement recommendations made by the audit and evaluation team. Where there are no major disagreements on the findings and recommendations by the organization being audited or evaluated, the report is accompanied by a general plan for implementing the recommendations for Board concurrence.

Where serious differences exist concerning the facts, the seriousness of a deficiency, or the action required to correct a deficiency, the organization under review may provide its response as an addendum to the report. The Audit Review Group reviews the document and recommends the approach management should take to resolve the dispute or suggest actions that the Board may take with respect to the problem identified.

Recommendations adopted by the Board are assigned to specific managers for implementation and become a formal followup activity monitored by the corporate staff that made the findings and recommendations. Progress in implementation of investigations, audits, evaluations, and followup improvement projects are monitored and reported to top management as described below.

In addition to the formal written reports, quarterly management reports are prepared to keep the Board and appropriate levels of management informed about the status of specific audits, evaluations, and improvements. A periodic summary of investigations conducted by the Office of the General Counsel is also submitted. The status of the followup activity being conducted in each of these areas is reported and exceptions that require management and Audit Review Group attention are highlighted.

Followup consists of an evaluation of the adequacy of the responses received from organizations responsible for taking corrective actions on recommendations. For recurring audits, a followup on the implementation of corrective actions is made during subsequent audits. For one-time audits or evaluations, followup is performed at the end of the period allowed for the implementation of changes and actions and the results transmitted to the Audit Review Group and Board, if necessary.

The followup process is inherent in both the formal written report and the quarterly management report. Each of the report recommendations are controlled through a formal system where they are tracked until they have been implemented. The status of these recommendations is summarized in the quarterly management report and departures from adopted recommendations are identified and discussed with the Audit Review Group. When recommendations have been satisfactorily completed, formal documentation of this fact is included in the quarterly management report and as an addendum to the original investigation, audit, or evaluation report.

COLUMBIA DAM AND RESERVOIR

7. Question: What is the status of the mussel protection program and when do you anticipate being able to reinitiate work on Columbia Dam?

Answer: In November 1982 TVA completed the transplant of 4,000 endangered birdwing pearly mussels from the Columbia impoundment area of the Duck River to four other locations in the Valley. Our schedule calls for demonstrating to the Fish and Wildlife Service the likely success of this program this year. Once we receive such approval from the Department of the

Interior we would be able to reinitiate work to the extent funds are available.

8. Question: The Duck River project, consisting of the Normandy Dam and Reservoir and the Columbia Dam and Reservoir, was first funded by Congress in 1969, was it not?

   Answer: Yes. Approximately $400,000 was appropriated for preliminary investigations leading to project construction.

9. Question: It has been funded since that time annually, hasn't it?

   Answer: Congress has appropriated funds for the Duck River project every year from 1969 through 1981, except for 1974. In 1982 no funds were appropriated, and TVA utilized funds that remained from fiscal years 1980-1981.

10. Question: At OMB's request, did TVA enter into two contracts with the Upper Duck River Development Agency, applying the Federal Water Resource Act provisions to this project?

    Answer: TVA entered into an agreement in 1971 with the Upper Duck River Development Agency in which that agency committed to repay to the Federal Treasury the cost of the water supply portion of the project as of July 1, 1971. A second agreement between the Upper Duck River Development Agency and the five municipal water systems serving the four-county area provides for the payment to the Treasury from proceeds through sale by the agency of specified quantities of water to these municipalities for a period of 50 years.

11. Question: Did this contract require the Upper Duck River Development Agency to pay to TVA and the U.S. Government $16,200,000 as a local contribution for water supply?

    Answer: Yes. Under the agreement between TVA and the Upper Duck River Development Agency, the agency is to repay $16,200,000 as the local contribution for the water supply part of the project. Of this amount, $5,700,000 is attributable to the Normandy Dam and Reservoir project and $11,500,000 is attributable to the Columbia Dam and Reservoir project. Normandy Dam was completed in 1977. The first payment on this increment of the debt is due on June 30, 1987, with annual payments thereafter until payment is made in full. The first payment on the Columbia project water supply obligation will be due ten years after that reservoir and dam is completed. Payments are then due annually until the entire obligation is discharged. If the Columbia unit is not constructed the agency's obligation is limited to $5,700,000 plus interest.

12. Question: Have the agency and the people of this area lived up to their obligation by establishing a trust fund and paying 5 cents for every gallon of water used out of the river since 1972?

    Answer: The contract between the Upper Duck River Agency and the five municipalities in the four-county area calls for each water system to pay into a trust fund the sum of 5 cents for each 1,000 gallons of water sold beginning February 1972. The agency and the people of the area have lived up to this obligation.

13. Question: Is the Upper Duck River Development Agency ahead of schedule on its contribution to the trust fund for the repayment of this obligation so that there is now in the trust fund $3,818,886.69? When will the first payment be due?

    Answer: Yes. The first payment of $5,700,000 will be due June 30, 1987. Based on the amount now on deposit in the trust fund, future interest earnings, and future payments by the five area cities, we are of the opinion that adequate funds will be available to make the 1987 payment.

14. Question: Was the project conceived and developed as a whole, that is, the Normandy and Columbia Dams and Reservoirs?

Answer: The Duck River project was planned in the late 1960s in cooperation with the Upper Duck River Development Association. It was planned, evaluated, and proposed to Congress as an integrated project consisting of two dams and reservoirs--Columbia and Normandy. The two dams, of course, function independently of one another. Normandy is completed and is functioning, while Columbia is not completed.

15. Question: The Normandy Dam and Reservoir is complete and functioning. What percent of the Columbia Dam is complete and what percent of the land for the reservoir has been purchased?

Answer: We estimate the Columbia portion of the Duck River project is about 45 percent complete. The concrete section of the dam is virtually finished and the earth embankment is about 75 percent complete. Approximately 50 percent of the land has been acquired and about 40 percent of the roads relocated.

16. Question: Was the benefit/cost ratio of 1.3 to 1 arrived at by considering the project as a whole? Since the project was conceived, inflation has increased both costs and benefits, has it not? If costs and benefits are both increased on the same ratio, does not the project still show a positive benefit/cost ratio? Has the cost escalation been due primarily to environmental suits against the project?

Answer: The benefit/cost ratio of 1.3 to 1 was a calculation made in 1969 for the Duck River project consisting of Normandy and Columbia Dams and Reservoirs.

In 1981 TVA prepared an informal study comparing remaining costs to remaining benefits on an annual basis much as was done in 1977 for the President's study on water resource projects. This informal study showed a remaining benefit/remaining cost ratio of 0.7 to 1. The remaining cost used in that study was $115 million. The remaining cost today is estimated at $147 million.

While there would be some increase in benefits on account of inflation since the 1977 study, some benefits there included have been disallowed. The U.S. Water Resources Council has just released "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies" which would apply to any evaluation of Columbia. While we have not fully evaluated the impact of this procedure on Columbia, the general effect of the changes included in the revision is to lower the benefits which may be claimed.

Thus, since the remaining costs are over 30 percent higher and the remaining benefits are both increased by inflation and reduced by partial elimination, a reevaluation of the project would probably result in a remaining benefit/remaining cost ratio significantly lower than 0.7 to 1.

The cost escalation is primarily due to the effects of inflation which has occurred during the delays which were required to bring the project into compliance with environmental laws and standards.

17. Question: In connection with the Columbia Dam and Reservoir, has the delay in the completion been caused primarily by environmental suits against the project? Has this delay not generally disrupted the area in that TVA has advised landowners of the general area to be purchased but has not been able to complete the purchase?

Answer: Completion has been delayed by litigation, but is primarily due to delays required to bring the project into compliance with various environmental laws and standards. The delay has been especially hard on landowners in the project area because of the uncertainty as to when their property will be acquired.

18. Question: Has the Corps of Engineers permit been approved for the project? Was this approval conditional? Is the condition a successful transplant of an endangered species? What is the status of this mussel transplant, and when will it be completed? With the completion of the mussel transplant, is there any reason, other than lack of funds, that will prevent TVA from proceeding to complete the dam and reservoir, expeditiously, as Congress has directed?

Answer: The Corps of Engineers issued the Section 404 permit on August 5, 1981. The approval had a number of conditions, one of which was the successful completion of the mussel conservation program. TVA completed the transplant of 4,000 mussels in November 1982. The schedule calls for demonstrating to the Fish and Wildlife Service the likely success of this program this year, which is phase one. Once we receive approval of the Fish and Wildlife Service we would be able to reinstate work to the extent funds are available. For phase two we must then prove the success of the program to the Fish and Wildlife Service before the reservoir can be impounded. We hope to prove success in 1985. There is no other reason that we are aware of at this time, other than the lack of funds, which will prevent TVA from completing the dam and reservoir.

19. Question: Refer to letters from the managers of four water systems showing that Normandy is furnishing good-quality water but that the completion of the Columbia Dam is needed to protect against future water shortages.

Answer: We have received copies of the letters you refer to from the managers of the water systems in Columbia, Lewisburg, Shelbyville, Tullahoma, and Manchester. The letters indicate that the people who operate the water systems in the area have seen improvement in water quality at their intakes since Normandy Reservoir was impounded and that the reservoir did play an important role during the 1981 drought. TVA agrees with these conclusions.

At no point was Normandy Reservoir drawn down to the point where its remaining life was "a few weeks" as the summary prepared by the Columbia Water System concludes. Also, contrary to what the Shelbyville letter suggests, we would not have operated Normandy Reservoir any differently during the drought of 1981 even with Columbia Reservoir. Normandy is now operated to meet a low-flow requirement of around 160 cfs at Shelbyville. After the completion of Columbia Dam it would continue to be operated to meet this requirement. Thus, Columbia Dam and Reservoir would not have benefited the water systems at Shelbyville, Tullahoma, or Manchester during the drought, nor would it be needed to protect against future water shortages at these locations.

20. Question: Congress has appropriated substantial money for the improvement of highways. A part of the completion of the Columbia Dam project requires the raising of Interstate 65 where it crosses the Columbia Dam. Can funds from the highway building be used for this purpose?

Answer: The impoundment behind the Columbia Dam will require the replacement of the existing I-65 bridges, one in each direction, and approaches crossing the Duck River. These bridges and approaches are owned by the State of Tennessee.

The cost of reconstructing the I-65 bridges and approaches by TVA is expected to be paid for out of Columbia Dam funds appropriated to TVA. The TVA Bridge Act of 1941 requires TVA to compensate the State of Tennessee for the reasonable actual cost of reconstruction of the I-65 bridges and approaches. Nevertheless, we do not see any legal reason why those Federal Highway Trust Fund monies that are available to TVA for interstate highway restoration and reconstruction could not be used for the reconstruction of the I-65 bridges and approaches. The use of Highway Truse Funds for such purposes would be contingent upon a State application to the Federal Highway Administration for funds for such purposes, and FHWA approval.

The practical effect of such a request would be to divert limited Federal funds from other State highway projects to a project which TVA is required to pay for under the TVA Bridge Act.

21. Question: Congress has passed a job bill. Maury County, where Columbia is located, has an unemployment rate of 23.3 percent, and Marshall County, the adjacent county, has an unemployment rate of 14.4 percent. What is the possibility of using some of these funds to complete this project?

Answer: The purpose and legislative history of the Jobs Bill give priority to those projects which can get unemployed people working rapidly. TVA's criteria, developed in the light of this priority, focuses on projects which can be implemented within 90 days of the March 24 signing of the bill.

Resumption of construction of the Columbia Dam cannot occur until the Interior Department approves our mussel conservation program, which would be in the fall at the earliest. Thus, Columbia Dam has not been considered for funding as a part of TVA's jobs program.

HIGH-TECHNOLOGY TRAINING

22. Question: A few weeks ago I asked TVA to provide me with a report outlining the efforts of the agency to initiate new programs of high technology training and demonstration. At this point of the record I would like to insert a copy of this report and I would ask the Board to outline today the efforts that are being undertaken and tell us what additional efforts could be undertaken by the TVA to accelerate work in this area.

Answer: The economy of the Tennessee Valley region and Nation is undergoing a profound change. Key policymakers in the Valley States support the movement toward quality high technology economic development. However, the nature of high technology growth is often oversimplified and misleading. Some decisionmakers have failed to realize that high-technology ventures require an orderly, sequential, progression of events which proceeds from a concept through research, development, engineering, manufacturing, and marketing.

In order for high technology economic growth and development to occur, certain specific elements (capital, population, transportation, energy, etc.) must be in place. One of the most important elements is the existence of highly productive education and training systems and strategies.

Research indicates that within the current labor force many are unable to support appropriate high-technology ventures. Although the shortages have resulted from many complex issues, research reveals that more emphasis should be placed on math and science in the secondary schools, more interdisciplinary engineers need to be produced, research and development activities need to be intensified, and more production technicians should be trained and retrained by the two-year colleges and vocational/technical schools. In addition, innovative ways must be explored to provide generic computer/high-technology skills for the region's rural youth.

Although the surface has only been scratched, TVA has made inroads in addressing the above issues through increased regional cooperation with State governments, local communities, private industry, and educational institutions. These efforts have focused on four primary goals:

- The development of high-technology industrial training programs directed toward specific new and expanding capital intensive industries in the Valley.

- The development of industry-specific training programs in educational institutions to enable more Valley region residents to obtain needed high-technology skills for jobs in industries.

- The development of upgrade retraining programs based on identified skill needs and designed to qualify displaced workers for jobs requiring high-technology skills.

- Providing assistance to the States in developing the educational infrastructure to begin preparing Valley region residents to enter high-technology industries.

Some examples of TVA's high technology program efforts are:

Alabama - TVA is providing assistance to the Governor, the various departments of education, and the Chancellor of Post Secondary Education in the development of a high technology training policy for the State. Curriculum design, equipment and facility planning, administrative organization, technical information on high technology skills, and industrial linkages for the development of a State high technology strategy are involved. Computer literacy programs which encompass the awareness of computer-related terminology and both hardware and software functions in secondary and two-year institutions are also being developed. TVA technical personnel are providing instruction in subjects which are in demand for high-technology industries where there are not enough instructors at the educational institutions. TVA is also providing postsecondary technical faculty with work experience at TVA in order for them to stay abreast of the developments in their fields.

Mississippi - TVA is assisting the office of the Governor, State and local departments of education, and local institutions in the development of high-technology curricula to provide services to State residents and area industries. TVA has assisted in the development of "The Tupelo Model," a high-technology training effort beginning at the high school level continuing through postgraduate studies. Skill areas include microprocessor/computer technologies, word/information processing, microelectronics, and robotics. This is the first educational model that effectively bridges the gap between education and the actual work experience.

TVA has also assisted the State Department of Vocational/Technical Education in designing mobile industrial training laboratories for specific high technology. These labs are designed for industrial media curricula development, computer and microprocessor technologies, and computerized numerical control technologies. The labs have been utilized in training some 2,300 residents for specific industries.

TVA has also provided technical and financial assistance to economic development boards, boards of education, and institutions of higher learning. These include:

- Community Development Foundation/"Big Ten" - electronic marketing
- Mississippi State University - robotics
- Tupelo Separate Board of Education - electronics
- Northeast Mississippi Junior College - microelectronics
- Itawamba Junior College - computer technology and a math/science demonstration for teachers

The assistance involves direct industry training, infrastructure development, institutional curricula development, and promoting industrial marketing techniques.

North Carolina - TVA is assisting the State in the development of two major projects. The first project entails direct industrial training at specific industrial sites. The industries involved are presently changing their production procedures to new high technology production methods. Working with Haywood Technical College, TVA has provided both financial and technical assistance to the college for training for employees at plant sites in electronics and microelectronics.

TVA is also assisting the State in curricula design at Haywood Technical College for several high technology skills. The first of these high technology curricula involves robotics.

Tennessee - TVA has assisted the State in various high technology training and developmental activities, including technical assistance and research for high technology industrial park development, and specific industrial and area market training programs. Among the TVA efforts on these are:

- Helping Chattanooga State Technical Community Center (CSTCC) to establish a robotics and systematic automated manufacturing center. This project resulted in over $2.2 million of capital investment from the public and private sector to make the center operational. TVA assisted in facility and curricula planning and faculty skill upgrade training. CSTCC is rapidly becoming the robotics service training center for industry in the southeastern United States.

- Assistance to Tri-Cities State Technical Institute, the State Department of Education, the Department of Economic and Community Development, the Office of the Governor, and the Johnson City/Washington County Industrial Development Commission to develop specific and area market training to recruit and serve industries. TVA provided assistance for the development of digital logic, microprocessor, and computerized numerical control manufacturing curricula and equipment. The program has served numerous industries in the area and will provide training for approximately 3,000 local residents by 1984. The wages for these positions range from $6.62 to $10.00 per hour. This effort also prevented a major corporation from relocating outside the region which would have resulted in the loss of 2,000 jobs.

- Assistance to the departments of vocational/technical education and industrial training services to provide high technology computer training to any new and expanding industry in the State. Through the use of a computer training mobile lab, some 52 industries will be served to train some 4,000 Tennesseans for jobs. Many of these industries will utilize the continuing education opportunities provided through the department of education.

- A plan was developed for the Hartsville school impact area on advanced technical training for high school, community college, and technical institute students, emphasizing electronics, microelectronics, computer science, and information processing. Teacher upgrading is a major part of the effort. All Hartsville impact school systems will be involved, as well as Volunteer State Community College, Nashville State Technical School, and the State Department of Vocational Education. Approximately 600 individuals will be assisted by this effort through training and job placement during the first two years.

- TVA helped develop a regional conference on Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) with the Memphis State Technical Institute. The conference was held in the spring and attracted approximately 300 participants.

- TVA is working on a model math/science program for the Watts Bar area. Teacher upgrading, laboratory assessments, and stipends for students interested in teaching in the math/science area are to be included.

Kentucky - TVA is currently providing technical assistance to Bowling Green area industries and Western Kentucky University for the development of robotics technology training curricula. Many area industries are looking favorably toward production changes utilizing robots. Because of the industrial request, TVA is assisting in the preliminary evaluation of high technology in these companies.

TVA can play a major role in assisting the States and local communities move toward high technology by: (1) helping raise the awareness level of State and local leaders as to the real nature and potential of high-technology ventures; (2) aiding States and local educational systems (all levels) in developing and implementing appropriate curricula, helping upgrade instructors in state-of-the-art technologies, expanding industrial computer-based programs to education, helping upgrade labs and shops, encouraging the use of industrial competency-based instruction; and (3) promoting the growth of preferred regional technological ventures based upon a strategy of intensive interaction among the business, education, and economic development marketing communities.

This effort could be accomplished by adopting a three-pronged approach: (1) the development of regional high technology centers; (2) by intensifying preferred high technology demonstrations that are currently being conducted by TVA in partnership arrangements with States and local entities; and (3) by developing a pilot generic, high-technology, basic skills program which will include all of the rudiments for job competition in the changing technological work place.

The basics of this approach would include, but not be limited to, the following components:

1. Regional Technology Centers

   o would be developed in cooperation with State and local agencies

   o would be located at sites with adequate physical plant facilities

   o would be in areas of potential industrial growth

   o would emphasize industrial education and training curriculum development and research

   o would address problems in the areas of math and science

   o would conduct high technology seminars on economic development for State leaders, financiers, and educators

   Potential areas: Chattanooga, Tennessee
   Decatur/Huntsville, Alabama
   Golden Triangle area in Mississippi
   Memphis, Tennessee
   Haywood County area in North Carolina

   Potential impact: 8,000 individuals served per year

   Initial cost: $2.4 million (1984)

2. High Technology Training Demonstrations

   o intensify ongoing demonstrations in electronics, microelectronics, robots, computers, lasers, telecommunications, and other emerging technologies

   o begin to implant elements of the successful models at other locations

   o increase the intensity of training for specific high technology skills

   o emphasize the aspect of permanent infrastructure development

   Potential areas: Tri-Cities area of Tennessee
   Tupelo, Mississippi
   Nashville/Hartsville, Tennessee area
   Western North Carolina area
   Chattanooga, Tennessee
   Decatur/Huntsville area in Alabama

   Potential impact: 10,000 individuals served per year

   Initial cost: $1.8 million (1984)

3. Pilot Generic High Technology Skills Program

- o would be confined to one State for pilot study
- o would concentrate on electronics, math computers, and science
- o would include both regular postsecondary and adult students
- o would emphasize retraining as a major initiative
- o would be located at sites provided by postsecondary technical institutes
- o upgrade labs and instructors
- o provide for instructors, materials, and expense for TVA-education faculty exchange

Potential areas: Chattanooga
Knoxville
Memphis
Nashville

Potential Impact: 1,600 individuals served per year

Initial cost: $3,900,000 (1984)

SOIL EROSION

23. Question: In my opinion the program for reducing soil erosion and preserving farmland productivity has been one of the most successful initiatives of the TVA in recent years. For the record, please tell us what has been accomplished during the current fiscal year for this activity and tell us what could be accomplished if funding were held harmless for 1984.

Answer: Reducing soil erosion is essential for future sustained agricultural productivity. In some areas of the Tennessee Valley region, such as west Tennessee and much of Mississippi, serious erosion problems exist on about one-fourth of the land. Of the 27.4 million acres of land in farms in the 201 Valley counties, about 3 million acres have severe erosion problems.

We initiated accelerated projects in 1979 in cooperation with USDA agencies, land-grant universities, and State and local organizations to help solve the problems. The educational activities of the projects are yielding impressive results. For example, in the west Tennessee area where program emphasis has been on conservation tillage, acreage devoted to no-till reached 220,000 acres last year compared with less than 43,000 acres in 1978. Acreage devoted to other conservation tillage such as close-row spacing and drilled soybeans increased to 690,000 acres. We estimate that conservation tillage alone saved more than one million tons of soil last year.

With the increased funding for 1983, we have expanded the accelerated soil and water conservation programs underway in west Tennessee, north Mississippi, and western Kentucky. We have initiated Operation SOIL (Save Our Important Land) in north Alabama. Secretary of Agriculture Block has asked TVA to work with the USDA Food and Agriculture Councils in the seven Valley States, to coordinate conservation programs on a regional targeted-area basis, and to serve as a national demonstration of multi-agency cooperation in solving soil and water conservation problems.

We have also increased the level of cooperative research with land-grant universities in Tennessee, Mississippi, Kentucky, Alabama, North Carolina, and Virginia. Emphasis is on developing new technology for conservation tillage.

In order to maintain this increased level of activity in 1984, an additional $1,000,000 will be needed to extend coverage to more farmers and treat larger acreages of land for soil and water conservation.

MHD RESEARCH

24. Question: Please tell us the extent of your relationship with the Unviersity of Tennessee Space Institute (UTSI) on magnetohydrodynamic (MHD) research.

Answer: TVA is not currently working with UTSI on MHD research. Our involvement in this area is limited to keeping abreast of the research being performed.

TVA's involvement with UTSI includes holding a series of meetings to introduce UTSI to the management of EPRI. The purpose of the meetings was to discuss using UTSI skills for possible future EPRI research.

TVA's only current use of UTSI research skills involves a nine-month contract with them to analyze data concerning the use of coals having a high chlorine content.

BROWNS FERRY ALERT

25. Question: On January 16 TVA declared an alert at the Browns Ferry Nuclear Plant. I would like to include in the record two articles concerning this occurrence. Please tell us what happened at Browns Ferry which led to the alert and how is TVA planning to assure that such accidents as occurred will not occur again in the future.

Answer: Routine samples indicated that trace amounts of radioactivity were being released to the river through the shutdown cooling heat exchangers. We decided to secure the normal plant shutdown cooling rather than continue to discharge slightly radioactive water. This required that we declare an alert condition under our Radiological Emergency Plan procedures. It was initially suspected that two heat exchangers were responsible for the radioactivity; but it was determined through later testing that only one heat exchanger was leaking. Such heat exchanger leakage or indications thereof are not uncommon in the nuclear industry. These events pose no threat to the health and safety of the public.

When plant operators were sure the leaking heat exchanger had been isolated, normal shutdown cooling was resumed using the second heat exchanger and the alert was terminated. During the interim, heat was removed using another normal cooling system. Other plant safety systems such as core spray, high pressure coolant injection, low pressure coolant injection, and the safety relief valves were operable during the event.

The alert was declared because plant procedures and regulatory requirements require us to do so, even though there was no accident. These procedures require us to notify our own emergency support teams, NRC, State and local authorities, and the press.

TVA's continuing surveillance test programs and preventive maintenance programs will minimize the probability of reccurrence of this type event. However, as noted previously, a heat exchanger leak is not uncommon. If the event were to occur again we would respond in the same manner.

NRC CIVIL ASSESSMENTS

26. Question: I would like to insert for the record a copy of the *Chattanooga Times* article dated January 14 concerning fines imposed by the Nuclear Regulatory Commission (NRC) for violations at the Browns Ferry Nuclear Plant (BFNP). Please tell us why fines are imposed by the NRC and also provide for the record a listing of all the fines TVA has paid since the beginning of the nuclear power program.

Answer: Listed below are the assessments that have been imposed on TVA nuclear operating plants. As authorized by the Atomic Energy Act and in accordance with its enforcement policy, the NRC imposes on occasion civil assessments for what it perceives to be violations of that act, regulations, plant licenses, or NRC orders.

Plant	Date	Amount	Description of Alleged Violations
BFNP	1/4/80	$29,000	Containment Integrity - Improperly secured equipment hatch and loss of primary containment integrity following startup, and excess time in reporting.
BFNP	6/16/80	5,000	Radioactive waste shipment - Inadequate radiation survey of transport vehicle. The surface dose rate must be less than 200 Mr/hr and the vehicle measured 600 Mr/hr.
BFNP	3/20/81	45,000	Fire Protection - Failure to install automatic sprinkler system in the intake pumping station after unit 1 refueling outage, battery rooms do not meet all modifications, license change for cable spreading rooms, fire watcher, fire drills, limits of cables per tray, and door blockage.
SNP	3/29/82	50,000	Control Rods - Unit 2 operated in mode 2 with the MTC more positive than zero delta K/K/°F, operator training on CRW, and procedures for startup.
SNP	9/24/82	40,000	Containment Spray - Reactor in modes 3 and 4 and neither train of containment spray operable, not aligned in accordance with valve checklist, and no procedure for CSS pumps to recirculate the refueling water storage tank.
BFNP	5/7/82	50,000	Security - Vital area barrier penetration
BFNP	12/17/82	3,125	Radioactive Waste Shipment - Defective closure devices
BFNP	1/13/83	40,000	Security - Unauthorized access through gate

NUCLEAR WASTE DISPOSAL

27. **Question**: Please tell us what problems TVA expects with nuclear waste disposal at Browns Ferry and other nuclear power plant sites.

Answer: There are currently only two disposal facilities in the United States for the disposal of low-level radioactive waste. We are continuing to ship low-level radioactive waste from TVA to both disposal sites. One in South Carolina has instituted volume restrictions on the amount of waste that can be disposed of there. The other in Washington State is more costly to use because it requires a 2,000 mile trip from TVA's nuclear plants. With more nuclear units coming online in the future, the logistics of making low-level radioactive waste shipments offsite become more difficult, and we could be severely hampered by further volume restrictions or a shutdown of one or both of the disposal facilities. For these reasons we are prepared to store low level waste onsite. In addition there is a plan for establishment of regional disposal compacts to provide offsite storage.

Sasser

OFFICE OF AUDIT AND EVALUATION

28. Question: My staff has received a number of calls from TVA employees and from families of TVA employees seeking assurance that information provided the Office of Audit and Evaluation would be kept confidential and that employees providing information to the office would not be subject to recriminations of any kind. For the record, provide a statement which indicates the Board's policy on this subject.

Answer: The TVA Board policy on this issue states that:

> Complainants and witnesses shall be free from restraint, interference, coercion, or reprisal at any stage of the presentation or processing of the complaint or allegation of misconduct, or any time thereafter. Any employee or manager found guilty of violating this policy shall be terminated.

RAILROAD TANK CAR REPLACEMENTS

29. Question: The fiscal year 1983 budget request included a provision for $1,225,000 for railroad tank car replacements for the fertilizer program. Page 79 of the fiscal year 1984 budget justifications indicates that no funds will be spent in fiscal year 1983 for tank car replacement. Please explain why the funds requested for fiscal year 1983 are not being utilized.

Answer: The plan to replace our obsolete tank car fleet began in 1979 on the basis that new cars would be delivered on a schedule that would replace existing cars which have to be removed from road service. (Under railroad regulations, cars that are over 40 years old cannot be utilized for commercial operations.) When the purchase plan was initiated, a lead time of 24 to 27 months was required from the time an order was placed before the cars were delivered. In 1981, however, as the national economic picture changed, tank car manufacturers were able to build and ship cars much quicker. In 1982, 66 new cars were delivered. This delivery of 66 cars in 1982 plus 32 received in 1981 provided 98 new cars which were sufficient to maintain TVA's fluid fertilizer technology introduction program through 1983. Starting in 1984, TVA plans to purchase about 10 cars per year until a total of 200 cars are on hand, thus completing the replacement of the remaining cars as they become obsolete. The 1983 funding for tank car replacements was shifted to a promising suspension fertilizer project which will provide a substitute for the urea ammonium nitrate solution presently used by most dealers in formulations to produce most commercial suspension fertilizers. Combined potential annual benefits to the fertilizer industry for these suspension fertilizers are estimated to be $7.6 million.

MULTIPROCESSING CPU

30. Question: The fiscal year 1983 budget justification indicated that under the general services account $5.2 million would be utilized in fiscal year 1983 for a multiprocessing central processing unit for TVA's computer facilities program. The budget justification for fiscal year 1984 on page 168 indicates that $12.9 million will be spent in fiscal year 1983 for this unit. Please explain why more than twice as much is being spent for this account as was originally justified to the Congress.

Answer: The multiprocessing CPU was to have been received, installed, tested, and accepted in fiscal year 1982. However, final testing and acceptance took place in the first quarter of fiscal year 1983. Accordingly, the 1983 estimated payment was increased from $5.2 million to $12.9 million. This action does not reflect any additional expenditure for the facility.

BACKCHARGES TO CONTRACTORS

Question: Last year the budget justifications indicated that $1,365,000 would be provided from nonpower proceeds for services furnished by vendors and contractors. Page 171 of the fiscal year 1984 budget justification indicates that more than $16 million will be spent in fiscal year 1983 for contractor services. Please tell us why such an expenditure of this magnitude is necessary.

Answer: The estimate in 1983 of $16.2 million is not an increase in the use of outside contractors. This amount is for work TVA will perform for its contractors to correct deficiencies in materials or equipment they supply TVA. TVA often assists its contractors in correcting warranty deficiencies or corrects the deficiencies itself and backcharges the contractors for TVA's work in correcting these deficiencies. The $16.2 million estimate includes the correction of a warranty problem involving the steam generators purchased from Westinghouse Electric Corporation for installation at the Watts Bar Nuclear Plant.

A problem with tube vibrations within the steam generators for Watts Bar was discovered after the equipment was received and installed onsite. To accelerate the repair process, TVA personnel, under the technical guidance of Westinghouse engineers, will be assisting in installing corrective measures to eliminate the problem.

This work performed by TVA personnel is estimated to be approximately $15 million which will be backcharged to Westinghouse.

DEMAND/SUPPLY

Question: TVA's 1983 high-range demand forecast indicates a need for additional generating capacity by about 1994, while additional capacity would not materialize until well beyond 1994 under the medium-range forecast. In addition, as part of TVA's annual power planning process, TVA will be completing in April 1983 a study of various options to meet future capacity requirements needed by 1994. What options are being considered in your study of future capacity requirements?

Answer: Options considered include continued deferral of Hartsville and Yellow Creek nuclear plants, restart of construction of these nuclear plants, cancellation of these nuclear plants, additional conservation measures, the addition of new coal-fired generating plants including new technologies such as atmospheric fluidized-bed combustion plants, and improvements in hydro performance and capacity. The relative costs and risks associated with development of these options are being considered for different load forecasts and various uncertainties associated with the different options.

Question: Based on the conclusions reached in your study, when will decisions be made on the four deferred nuclear plants?

Answer: Considering the relative risks and uncertainties associated with the various options available, the least-cost option at this time is to continue deferral of the Hartsville and Yellow Creek nuclear plants. Based on last year's high load forecast, a decision on how to meet the forecast would be required in the 1986-1988 timeframe in order to meet a 1994 need date.

Question: Even though TVA is still considering whether to complete the four deferred units, it has begun selling off some of the equipment at these sites. TVA has contracted with a Texas auctioning firm to auction the surplus/scrap equipment and tools at both the deferred and canceled nuclear facilities. TVA expects to recover $90 million of $2 billion of unneeded equipment. What is the basis for the estimated $90 million recovery of surplus/scrap equipment and tools?

Answer: We cannot determine or estimate with surety at this time what dollar recovery TVA will achieve from the sale of property made surplus due to changes in TVA's nuclear construction schedule. It depends upon factors such as the economy and consumer demand in general, and in particular on the fact that other surplus nuclear equipment may be released on the market due to plant deferrals by other utilities.

Question: Are TVA's estimates for recovery attainable?

Answer: We expect to recover at least the $90 million you mentioned, and we hope much more.

Question: How much has TVA gained from the sales? What was the estimated value of this equipment?

Answer: Through February 1983 we have received revenues of $26 million from the sale of material and equipment made surplus due to changes in TVA's nuclear construction schedule. This surplus material and equipment had an investment cost of approximately $37 million.

Question: Besides an auction, what other measures is TVA using to recover its investment?

Answer: In addition to auctions, TVA has employed a number of approaches toward making sales. These approaches include negotiating sales with end-users, TVA's original suppliers, and dealers; competitive advertising; sales through catalogs; and marketing arrangements with individuals and companies with expertise in selling this type of material. TVA also has transferred property no longer needed at deferred and canceled nuclear plants to other in-house uses.

COAL

Question: GAO's August 1981 report, "TVA's Coal Procurement Practices More Effective Management Needed," made numerous recommendations designed to bring about improvements in TVA's coal purchasing practices. In commenting on the report, TVA strongly disagreed with most of the reports' observations. What progress and actions has TVA mad o implement the GAO recommendations?

Answer: As we previously informed GAO, GAO's recommendations were, for the most part, proposals that TVA do things it was already doing. The GAO recommendations and actions taken are as follows:

> Recommendation: We recommend that TVA revise its coal purchasing practices. TVA should implement a better program of forward planning to minimize the award of contracts during periods when coal demand is high--for example, the predictable miners' strikes--and to limit the duration of contracts that must be awarded during these periods.
>
> Response: The TVA Board exercises periodic review of TVA's coal procurement program. A strategic plan for the coal supply program has been updated. This plan formally documents objectives and strategies for coal supply and delivery. It is designed to provide a guideline for both short- and long-range tactical planning activities. Current plant-by-plant coal supply strategies for the next 10 years supporting the strategic plan have been completed and are in use. The supply strategies are aimed at providing maximum future procurement flexibility in a cost-effective manner and are based upon the unique requirements of each plant, expected coal burn at each plant, and a range of possible coal market conditions. In addition, a full-scope internal audit of TVA's coal supply program, including the acquisition and use of coal reserves, organization, and planning and management processes, is in progress. Also, we are examining broad policy issues related to coal management at TVA.
>
> TVA is establishing an automated coal information system to monitor the program and to supply data to support planning activities and near-term management decisions. The coal quality portion of the computerized coal data base has been operational for about two years. Financial information, including payments to vendors and cost adjustments, is a part of the data base. Programming is currently underway to add coal contract specifications and historical information.

The subject of coal inventory policy is being studied, including the possible use of computer optimization models available from both inside and outside TVA. Managers are employing probabilistic methods for forecasting ranges of uncertainty in future coal requirements for the TVA power system.

Recommendation: TVA should also renegotiate at the earliest opportunity long-term contracts with reopeners entered during unfavorable conditions. If better prices cannot be renegotiated, TVA should consider cancellation.

Response: TVA included reopener clauses in its long-term contracts well before GAO expresed an interest in TVA's coal procurement program, and has always exercised its reopener rights when prudent to do so. Consistent with market conditions at the time, during the last 38 months, TVA has exercised reopener rights in 23 contracts. Of the 23 contracts, negotiations led to significantly lower prices on 13, termination of 1, schedule reduction with extended term on 2, with negotiations continuing on the remaining 7 contracts, which total approximately 143,000 tons per week. In the next eight months, TVA will be evaluating reopener rights on five additional contracts totaling approximately 23,000 tons per week.

Recommendation: TVA should also consider all responsive offers from coal suppliers regardless of geographic location; the economics of the source should be the primary consideration as to whether the offer is accepted or rejected.

Response: TVA considers all bids on an economic basis regardless of the supplier's geographic location.

Recommendation: TVA should also work for the success of the Small Coal Operator Assistance Program by establishing all set-asides possible.

Response: The Small Coal Operator Assistance Program is an innovative step taken by TVA on its own initiative to help small producers. Presently all coal purchases for certain of our plants are set aside for small operators. TVA appointed a team to evaluate the program. All the organizations within TVA charged with implementing the program were represented on the team. This evaluation included a look at all aspects of the program, from set-asides to technical assistance. The study has recently been completed and is being considered by upper management.

Recommendation: TVA should also exercise caution in proceeding with development of the ENCA reserves, particularly the economic feasibility of producing the desired quality and quantity of coal from ENCA. It should avoid the problems encountered at Breckinridge in developing ENCA. Specifically, (1) ENCA production levels should be realistically established, (2) the coal quality of ENCA should be thoroughly analyzed to determine if it will need to be washed and, if so, the expense of another wash plant should be factored into the feasibility determination, and (3) if transportation is contracted for separately, the contract should not be tied to optimum production levels and should allow for reopeners.

Response: TVA is exercising caution in planning for the development of the ENCA coal reserves. We have completed an extensive core-drilling program to obtain geologic data and to determine the physical and chemical composition of the coal. Washability tests were also conducted on the core samples. The data from these analyses are being evaluated to determine the quality and quantity of potential production from the ENCA coal reserves. We are evaluating cost data on coal deposits similar to the ENCA reserves, both in terms of operating costs and capital requirements. Along this line, preliminary mine designs have been pointed towards optimization of operations rather than the maximum possible tonnage level. These initial reviews are combined with ongoing TVA coal requirements and market analyses to determine when the ENCA reserves should be placed in production. Brigham Young University is currently assessing the combustion characteristics by conducting laboratory-scale combustion tests. TVA is concurrently addressing the potential environmental problems associated with burning ENCA coal.

Recommendation: To ensure that it is paying only for the quality of coal being received, TVA should install effective sampling facilities at the Kingston Steam Plant and take action against those vendors that continually provide lower quality coal. TVA should also assign someone to monitor the sampling at Breckinridge. In the future, TVA should also avoid contract provisions that allow contractors to do sampling.

Response: As GAO knew when it made its recommendation, procurement of a new sampling facility for Kingston was already underway. The facilities were completed on March 20, 1983, and placed into operation March 21, 1983. These facilities enable coal unloaded from trucks to be sampled by a cross-stream cutter. TVA anticipates more accuracy in sampling when the ability to adequately sample all truck coal at Kingston is achieved as a result of this installation. TVA has always pursued its legal rights against contractors who breach the quality provisions of their contracts.

TVA has recently stationed an employee at Camp Breckinridge to monitor the overall operations. With few exceptions in special circumstances, TVA's contracts have always provided for TVA to sample, and quality adjustments are based on TVA's sample.

Recommendation: To provide adjustment in coal prices commensurate with costs of benefits from the coal delivered, TVA should discontinue using the current coal quality price adjustment formula. Instead, it should review the alternate formula we developed or develop another formula that will reflect actual costs. In addition, the formula should be included in any planned procurements as soon as possible.

Response: In 1981 TVA organized a coal quality task force to study the economic effects of variances in coal quality on generating unit performance as a necessary step in determining a viable price adjustment formula. The task force, composed of members representing three organizations within the Office of Power, completed its study of the subject and submitted a report with recommendations in May 1982. The coal quality adjustments as recommended by the task force were used in Requisition 68, Request for Term Coal for Allen and Gallatin Steam Plants, February 1983. Our provisions for spot coal purchases are currently being revised to include the new adjustment formula.

Recommendation: In order to obtain the flexibility to match coal deliveries with coal needs over the long term, TVA should revise its coal procurement procedures to:

--make greater use of spot purchases at all steam plants and satisfy a specific percentage of forecasted coal requirements through spot purchases, and

--include provisions in all term contracts which give it the option to cut back on deliveries when needs are not as great as forecast.

Response: The GAO later clarified its recommendation concerning spot purchases by stating: "Our recommendation is that TVA not enter into term contracts for full power plant needs, but leave some specified margin for the spot market in order to match coal supplied with power system needs." TVA does intend to make greater use of spot and short-term purchases consistent with the provision of the Consent Decree to gain flexibility in matching coal supplies with demand. Such purchases will be especially useful at plants where there is a wide range of uncertainty concerning future burn. In order to obtain security of supply and protection against market price aberrations, however, it is still necessary that the majority of coal be purchased under term contracts.

To provide additional flexibility in our procurement program, TVA is attempting to negotiate 20 percent unilateral cubtback rights, instead of 10 percent, in new term coal contracts. In addition, we have provided for flexibility in the length of recent contracts.

Recommendation: Also, to reduce coal inventories in the near term, TVA should exercise its option to reduce deliveries by 10 percent to steam plants with inventories that exceed target levels.

Response: TVA has always exercised its option to reduce deliveries when that is in TVA's best interests. To reduce inventories to target levels, new coal purchases are being kept to the essential minimum and contract cutback rights have been exercised where prudent and appropriate. Other possible measures to reduce inventories include (1) "stretchout" where current deliveries are reduced in exchange for extension of term of contract, and (2) negotiated cancellations or reductions of existing contracts. Discussions with coal vendors have resulted in one "stretchout" contract; however, in light of the present economic climate in the coal industry, the majority of vendors have not been receptive and have taken the opportunity to request reinstatement of the cutbacks now imposed. Efforts continue in these areas.

Recommendation: We further recommend that TVA incorporate new density figures, based on density surveys recently completed and those now being conducted, into inventory calculations.

Response: TVA began using nuclear probe density values in June 1981, and is leading the industry in this area. New measurements are to be performed whenever there is a significant change in size and/or coal composition of a stockpile or when an inventory adjustment of +2.0 percent is required.

Question: As a result of these actions, what have been the savings to the ratepayers?

Answer: We believe the actions TVA has taken to date would have been implemented whether or not the GAO had prepared a report. Most of the activities recognized in the report were either in progress or were in the process of being implemented at the time of the GAO audit. TVA's actions to date have resulted in cost savings or avoidances of over $770 million. These cost savings resulted from TVA's normal business practices and the general decline in coal prices, however, rather than from recommendations by GAO.

Question: How will the reduction in the demand for electricity and TVA's change in generating mix from heavy reliance on coal to reliance on nuclear power plants affect future coal purchases?

Answer: The outlook for future coal purchases has a great deal of uncertainty as reduced demand for electricity and increased output from nuclear plants have resulted in a decline in TVA's coal consumption from 37.9 million tons in fiscal year 1977 to 28.8 million tons in fiscal year 1982. Our best estimate is that TVA's coal consumption for the years through 1990 will be approximately the same as last year. Coal has become TVA's "swing fuel" because hydro and nuclear plants have lower operating costs than coal-fired plants. Consequently, coal generation is influenced by system load requirements, nuclear plant availability, and the amount of rainfall in the Valley. In response to this situation, TVA has adopted a planning strategy based on the probable range of coal requirements at its various plants. Strategies have been developed on a plant-by-plant basis to handle the uncertainties of the future burn. The probable range of requirements varies among the plants. At some plants, long-term contracts may be purchased for a large portion of the plant's requirement with reasonable certainty that the coal will be needed. At other plants, most of the requirements must be purchased on short-term or spot contracts. For virtually all term coal purchases, we are incorporating greater delivery variation rates than has been the case in the past.

Question: To assure the availability of adequate coal to supply system requirements, TVA purchased several coal reserves. However, to date, little coal has been moved from these reserves and there are questions about the quality of coal on some of the reserves. (1) Does TVA intend to conduct benefit/cost studies on whether these properties should be retained or disposed of? (2) What are TVA's intentions to develop these coal reserves to meet TVA's coal requirements?

Answer: Approximately 50 million tons of coal have been mined from TVA reserves. Of this amount, some 47 million tons have been delivered to TVA, while about 3 million tons has been produced and sold to other markets under lease arrangements with third parties. TVA has received or credited as royalty income over $15 million through 1982.

TVA has conducted feasibility studies on coal properties and is in the process of gathering additional data as part of ongoing studies regarding the alternatives of production and leasing or sale of properties. At the present time we plan to retain all of our coal properties.

TVA will retain and produce its reserves to meet coal requirements only if there are clear economic and/or security of supply advantages over market alternatives. At the present time, the major portion of production from TVA reserves is from the Camp Breckinridge property in western Kentucky with minor amounts being produced from Appalachian coalfields. We do not have definitive production plans for the two major properties in southern Illinois. We do anticipate increased production in the next few years for TVA properties in the Appalachian coalfields.

TVA OVERSIGHT

Question: In March 1982 GAO issued a report "Tennessee Valley Authority - Options for Oversight" (EMD-82-54) which recognized one option available to the Congress to oversee TVA was to review the limit of TVA's bond ceiling. Historically, this review occurred about every four to seven years. In 1979 TVA's bond ceiling was raised from $15 billion to $30 billion, based on a nuclear construction program of 14 units and unspecified additional capacity beyond these 14 plants. It was anticipated this increase would carry TVA through the mid-1980s. However, since 1979 TVA has adjusted its load forecast downward several times and consequently canceled four nuclear units and deferred construction of four others. The result of these actions is marked decrease in the rate at which TVA must borrow construction funds. TVA may not have to request another increase in the ceiling for many years beyond 1985 which would significantly exceed the historical interval of four to seven years that TVA has had to justify to the Congress the need for additional borrowing authority. At your projected rate of borrowing, how long will it take before TVA's $30 billion bond ceiling is committed?

Answer: When the costs to complete the deferred nuclear plants (Hartsville A and Yellow Creek) or their altertnatives is considered, over 90 percent of the $30 billion will be committed by the end of fiscal year 1985. The balance would be committed at such time as commitments were made to capacity to serve loads beyond those served by the above plants. This timing will depend on how rapidly actual and forecasted loads grow.

Question: In order for the Congress to maintain the historical interval for making in-depth reviews of TVA's need for additional borrowing authority at what level should the ceiling be by 1985 in order for another review of the ceiling to occur?

Answer: Congress can review the level of TVA's borrowing authority in 1985, as it can in any year, regardless of the level of borrowing authority that has been used or committed to uncompleted projects. Although historically TVA's borrowing authority has had to be increased at four to seven year intervals to keep pace with the demands of new construction, congressional oversight is not limited to such intervals.

Indeed, major oversight hearings of the TVA power program have been held in both the Senate and the House during the past 10 years at times not associated with statutory increases in TVA's borrowing authority. The last comprehensive hearings were held by the Senate Environment and Public Works Committee in spring 1981. The House Public Works and Transportation Committee held field oversight hearings in mid-1982.

In any case, TVA's borrowing limit should remain at $30 billion. This is based on the fact that most of that amount will be required to complete construction which has already begun.

If the limit were lowered now to that required to complete Bellefonte Nuclear Plant, and above medium loads developed, an immediate increase would be required to provide authority to complete the deferred nuclear plants or their alternatives (1986-1987). If below medium loads develop, there will be no need for a borrowing authority increase for several years. Therefore, there is at present no level at which the ceiling could be set that would ensure the need for an increase in 1985 and at future historical intervals.

Question: According to TVA's budget, it expects to meet its total capital requirements entirely through internally generated funds and not borrowings by 1987. How will TVA be able to meet its total capital requirements through internally generated funds by 1987?

Answer: The statement to which you refer in TVA's budget justification book can be misunderstood. Current estimates indicate that TVA may be able to reduce its borrowings to very low levels by the late 1980s regardless of how future loads develop. However, borrowings beyond that point will depend entirely on how loads actually grow and how much new capacity will be required beyond the plants now being completed.

By 1987 TVA should have completed construction of the Watts Bar and Bellefonte units and reduced capital outlays for transmission facilities associated with new generating plants. The only remaining capital outlays of significance in the 1987 time frame would be expenditures for additions and improvements at existing generating plants. Cash generated from net income, depreciation, and amortization allowances should be adequate to finance these expenditures.

Achieving the objective of zero borrowing in the later 1980s is immaterial as far as the need for TVA to continue its borrowing authority without reduction is concerned. TVA has undertaken the construction of Hartsville Plant A and Yellow Creek plant. Although they are presently in a deferred status, TVA must have assurance that it has the resources to complete those plants if necessary to do so. This will require most of the balance of the current $30 billion limit. Removing TVA's authority to finance the completion of these units would be tantamount to abandoning them now at a time when TVA believes information is insufficient to make this decision.

Question: If this goal is achieved, what justification would TVA have for continuing its borrowing ceiling?

Answer: TVA needs borrowing authority available in amounts adequate to complete the deferred nuclear units. Should we need to resume construction in the late 1980s timeframe, adequate borrowing authority would not be available to support the completion of those units or alternative supply facilities which may be more economical at that time.

Question: Without the need to borrow funds, will the Congress lose another avenue to oversee TVA's operations?

Answer: Congress would not lose any avenue to oversee TVA's operations if TVA does not need to borrow funds. Congress has ample authority to review TVA's power system operations, and change them if it so desires, at any time and in any manner it wishes. TVA has clearly shown by its recent actions of canceling or deferring eight nuclear units that unused borrowing authority is not resulting in unnecessary spending.

In addition to any special oversight that may be conducted by the public works committees of either House, the appropriations committees each year effectively conduct an oversight of the power system in their appropriations hearings. TVA also appears before congressional committees or responds to congressional questions each year on a whole host of specific issues. In addition, the statutory responsibility to keep TVA's power rates as low as feasible, the detailed financial requirements in the TVA Act and TVA's Basic Bond Resolution, and the very broad suability of TVA in State and Federal courts mean that it is difficult for TVA to stray from the "straight and narrow" in any event.

POWER PLANT SECURITY AND INVENTORY CONTROLS

Question: Subsequent to a GAO March 1981 report, TVA reported it had undertaken corrective actions to improve the security and inventory controls at construction sites. However, a November 1982 TVA internal report showed that at TVA's construction sites an overall average of 41 percent of the tagged equipment could not be located. In fact, the loss at one site was over 60 percent. What action is TVA taking to control the losses of tagged equipment at construction sites?

Answer: TVA's actions to improve the security and inventory control at its construction sites include:

1. The appointment of a warehouse employee to be responsible for tagged equipment inventory counts at each major construction site.
2. Periodic inventory counts to be performed at least once every two years.
3. Maintain onsite accurate records of all items to ensure stronger internal controls.

The November 1982 internal report referred to was based on TVA's internal audit staff's review of existing records, which were based on inventories conducted months earlier and prior to the corrective measures as stated above. Therefore, the internal audit report cannot be considered an assessment of the effectiveness of the actions outlined above. Inventory counts currently underway at all major construction sites are scheduled for completion July 1, 1983.

NUCLEAR POWER PLANT SAFETY

Question: NRC documents have shown TVA nuclear power plants had a low safety rating based on a number of mishaps. Does TVA agree with NRC's assessment?

Answer: As indicated in the response to the previous question about measures TVA is taking to improve nuclear safety records, it is TVA's policy to keep NRC fully informed about its nuclear activities, and if there is any question about reportability of an occurrence under NRC's requirements, TVA makes a report. TVA expeditiously takes appropriate action on all reported occurrences. TVA is taking every reasonable step to safely build and operate its nuclear plants. As stated in the November 24, 1982 letter from J. P. O'Reilly, NRC Regional Administrator, to TVA which transmitted NRC's systematic assessment of licensee performance program for the period July 1, 1980 through June 30, 1981, "it is my view that the Tennessee Valley Authority's conduct of nuclear activities shows a proper concern for nuclear safety, and the utilities resources are being properly applied."

Question: What measures has TVA taken to improve safety record?

Answer: The TVA Board is strongly and personally committed to improving the safety of TVA's nuclear generating plants. It is TVA's policy that TVA's nuclear power activities are carried out with protection of public health and safety as the paramount consideration, and a significant amount of Board attention is focused on the management of TVA's nuclear activities. TVA has substantial experience in the development and application of safety technologies and procedures for nuclear facilities and applies that experience in establishing its safety standards, practices, and procedures and in implementing its safety-first policy over and above any NRC requirements.

TVA recognizes the value of differing views about nuclear health and safety matters and encourages voluntary staff expression of safety considerations associated with the design, construction, and operation of TVA nuclear facilities. It is also TVA's policy to keep NRC and the public constantly informed of all activities regarding nuclear plant construction, operation, and testing. If there is any question, TVA errs on the side of reporting any unusual occurrence at a nuclear plant. Although this policy may result in what seems to be large numbers of reportable occurrences to NRC, we believe it best serves the public interest and our own safety-first policy.

Last year TVA voluntarily established an eight-point program to improve safety performance at our nuclear power plants. The eight areas identified for increased emphasis were (1) supervisory involvement at all levels in plant operation; (2) professionalism and professional discipline among operator and craft personnel; (3) determining the root cause of many operational problems, equipment malfunctions, and abnormal conditions; (4) utilizing operating experiences at other nuclear plants; (5) all aspects of training, except perhaps training to pass the licensed operator examinations; (6) the shortage of personnel in certain technical and skilled positions; (7) programs to control the implementation of design changes and modifications; and (8) management involvement in the radiological aspects of plant operations.

In addition to these measures, all TVA management personel responsible for nuclear activities have been instructed to endorse TVA's safety-first commitment and stress its importance to all employees under their supervision. Job descriptions and performance appraisals of these management personnel will include nuclear safety and quality assurance statements to assure accountability.

HYDRO DEVELOPMENT

Question: TVA has completed an inventory of all dams in the region and studied the potential for their development as a power generating source. Private entrepreneurs have expressed interest in installing power generation at several of these dams. Does TVA plan to install power generation at any of the dam sites?

Answer: TVA has undertaken a small hydro program to examine the merits of developing the hydropower potential at existing small non-TVA dams in the Tennessee Valley considering present-day economic and technological circumstances. Through this program, we believe TVA can play a worthwhile role in evaluating the power-generating potential of the Valley's small dams. Within this region TVA is the logical organization to which power distributors, government officials, and individuals are likely to turn for technical assistance in the development of hydroelectric projects.

The first stage of our program was an inventory of 2,500 existing dams located within the Tennessee River watershed and the TVA power service area. This inventory was then screened to eliminate dams which were unsuitable for power generation. Of the 83 dams which passed this initial screening, each was inspected to determine the practicality of adding or restoring generation facilities. Next, reconnaissance-level cost studies were performed for 24 of these dams. Based on this review, 10 dams with the best redevelopment potential were selected for detailed feasibility studies--the second stage of our program. The feasibility reports, which include a detailed cost estimate, evaluation of project benefits, and a benefit-cost ratio, were completed and published in a February 1982 report. A potential developer can use these findings in deciding whether to proceed with the restoration of any of these facilities. TVA has furnished the owners of these dams copies of the reports, and we have made copies available to members of the public who might be interested in developing small hydroelectric facilities.

Because none of these dams belong to TVA, we do not plan to redevelop any of them ourselves. In the event any of these small hydroelectric facilities are developed by others, under guidelines for dispersed power production approved by the TVA Board, the developers of small hydroelectric facilities can (1) use all or part of the output of their production facilities to supply their own needs, or (2) sell all or part of the power output to TVA or the distributor of TVA power for the area.

Question: Would any of these facilities be available for private or public development?

Answer: The inventory included small dams owned by municipalities, States, and individuals and power facilities could be developed by either the present owners or the present owners could make the sites available for others to develop. TVA's small hydro program will enable us to more effectively assist these prospective small power producers in the development of hydro facilities.

PRESIDENTIAL TASK FORCE

Question: A Presidential task force of private industry executives was assigned to review TVA's operations. Has the task force completed its study?

Answer: To date, we have not received any information concerning the task force's review of TVA operations.

Question: Does TVA agree with the task force's conclusions and recommendations?

Answer: We have no information on the report.

ELECTRIC RATE INCREASE

Senator STENNIS. Mr. Chairman, I want to briefly mention a matter.

As I understand now gentlemen, your reference to the rates, possible change will be merely a restoration of the previous rate as you used a part of this year, this calendar year or last year.

Mr. DEAN. Senator, I would like to emphasize what I said before. Each year stands on its own. But we anticipate at this time that power bills starting in October will be about where they were before we put this special reduction in. That is our current outlook.

Senator STENNIS. That is what I call a restoration. Did you anticipate that at the time you made this reduction?

Mr. DEAN. Yes, sir, we did.

Senator STENNIS. Do the people understand it? Did they understand it at that time?

Mr. DEAN. We made it as clear as we possibly could, Senator. It was covered in the media.

Senator STENNIS. You make it clear again if you will when you go back. [Laughter.]

Mr. RICHARD FREEMAN. We are very sensitive to that and you are quite right. We tried our best to make it clear. Your admonition is a good one.

Senator STENNIS. I am sure you did it in good faith. I don't doubt that at all. But when the rates have to go up, the consumer has to dig a little deeper in his pocket you see. We hear from them and rightly so.

FERTILIZER DEVELOPMENT PROGRAM

I want to mention another thing, Mr. Chairman. I remember in the very earliest days, the prospects of a plan to produce material for defense purposes back in World War I—fertilizer was the first advertised purpose. But munitions were the purpose—production of ammonia and nitrogen for the war effort. The idea was that that capability would not be lost at the end of the war because it could continue as a fertilizer production plant.

Still, how much are you in this fertilizer experimentation and research business? And how much is it used in the commercial sector? I know down in Mississippi we have a large industrial unit for manufacturing fertilizer. I think they do this in cooperation with TVA. That ought to be spread on the record every year because it is so impressive and important.

Mr. Dean. Yes, sir. We would be delighted to spread the details on the record. Dr. Bond is here.

Senator Stennis. Just summarize here if you will.

Mr. Dean. Dr. Bond is here. He is the man who runs that operation.

Senator Stennis. Just let him stand up and speak into the microphone.

Mr. Bond. My name is Bill Bond, manager of the Office of Agricultural and Chemical Development.

Senator Stennis, at the present time the emphasis in the fertilizer program is to develop new fertilizer technology and get that adopted by the fertilizer industry which, in turn, then benefits both the farmer and the consumer. About 70 percent of all technology that is used in manufacturing fertilizers that farmers use has been developed by TVA.

Senator Stennis. Seventy percent of the current usage you say?

Mr. Bond. Yes. Seventy percent of all fertilizer being manufactured in this country——

Mr. Dean. Of the technology, sir.

Mr. Bond. So our emphasis is in that area. Our emphasis is not TVA being a large producer of fertilizer, but TVA being a developer of the technology and getting it introduced. We think we have been successful.

Senator Stennis. It is a nationwide use that you speak of, is it not, when you refer to this technology?

Mr. Bond. Yes, and international, too, Senator.

Senator Stennis. Nationwide and also international?

Mr. Bond. Yes. The fertilizer program is a national program.

Senator Stennis. I know down home we have Mississippi Chemical Corp. that has been highly successful and, of course, fertilizer now is high as a cat's back. [Laughter.]

Mr. Bond. Not this year, Senator. You can't give it away.

Mr. Richard Freeman. Senator, you might be interested to know that we have been invited as a board to go to Nebraska where there is to be a celebration on June 12 in honor of Senator George Norris. The board is accepting that invitation and at that occasion we will also be visiting some of the places where the fertilizer is being tested: the University of Nebraska and some of the other land grant colleges in the Midwest.

Senator Stennis. That is very interesting. It fully justifies those that had faith in the project way back and fertilizer has meant so much to increased production of our farms, acres that are planted. And you still have this as a going concern and you have no plans to abandon your efforts in that field. Is that correct?

Mr. Dean. That is correct.

Mr. Richard Freeman. Congress willing.

Senator Stennis. I understand. We fuss about it some. We usually dig up the money when we see results being obtained.

Mr. David Freeman. If I could add this thought, I don't have the farm knowledge that my colleagues on the board have, but I remember when you and I discussed the subject during my confirmation hearing. The thing that has impressed me during the years I have been on the board is TVA's role in keeping competition alive in the fertilizer industry. It is usually the smaller companies that take our new innovations and introduce them and for that reason it has added to the productivity of the farmer but also the viability of the fertilizer industry. The larger companies then take the product after it has been introduced.

TVA is a model in the fertilizer area which I commend to the Federal Government to follow in the energy field. Our program has a track record of success in getting new products introduced into the commercial mainstream. It has happened. I have dealt in the energy field and we seem to take the energy technologies up to the 10-yard line and then fumble because there is a gap between the research and the commercialization.

TVA's fertilizer program has a success story equal to none I can think of in the Federal establishment in taking R&D, working with the companies sufficiently for them to introduce it, and then TVA-getting out of it. It bears scrutiny. I appreciate your raising this point and giving us an opportunity to talk about it because it is truly one of Government's success stories that has aided the productivity of the Nation.

Senator STENNIS. And the need continues for the production and research in this area. That is the point I wanted to make.

Mr. DAVID FREEMAN. That is certainly true because of the increasing costs of the ingredients and the need for greater efficiency, which we are working on.

Senator STENNIS. Let me say this, Mr. Chairman, to these gentlemen. As I see it—and I have been rather close to the program all of these years—you are making a great contribution there.

But this idea now of unemployment, that is the one thing that I am afraid of—unemployment. I am more afraid of that than nuclear weapons being dropped on us right now.

Unemployment could be the most dangerous issue of the future to our, literally the main danger as I see it, to our elective processes—running our internal affairs through the people voting, choosing their officers, legislators, and otherwise. So, I think we all have to really put out an effort to solve that problem. Some say that you shouldn't be concerned about unemployment. I think we have all got to be concerned about it, all agencies of the government, private enterprise, too; to get people something to do, something for which or from which they can earn and support themselves.

Otherwise, there is no one to support them except the Government and there is a limit on that. So that would be where I would want to consult with you or to offer advise if you want to call it advice.

All right, that is all I have. I want to commend them for the work they are doing.

Mr. DEAN. Thank you, Senator.

UNOBLIGATED CARRYOVER BALANCES

Chairman HATFIELD. Thank you, Senator Stennis.

I think when Senator Sasser raises the question as to OMB's view concerning the $40 million added to the jobs bill for TVA and its reviewing of that obligation at this point, gentlemen, I think it is raised, probably legitimately, by OMB when they see the figures that we have about $131 million more for fiscal year 1983 than the program originally envisioned, all of which carry over from year to year with not much being accomplished.

In the meantime, I have the hearing record now from last year, the breakdown, the carryover from, into 1982. The total of $128 million, $100.3 million for coal gasification demonstration plant, $16.7 million for the Columbia Dam and Reservoir, $5.2 million for Teleco Dam and Reservoir, and $6.6 million for all other TVA projects and programs.

Gentlemen, am I not correct in saying that that carryover for those earmarked projects does nothing?

Mr. DEAN. It is not available for our general project. Yes, it is, in effect, earmarked.

Chairman HATFIELD. I want to get clear in my own mind the impression or the instructions that you feel that you are operating under from the Congress, because I don't think that when you are looking at over $100 million just being idle in an account and not available for other purposes that that is good fiscal management.

If there are inhibiting forces here because of specific congressional instructions, I would like to have you submit that for the record. I do think that this committee must review such matters that permit us to or create the situation that we have in these carryovers. We must use the limited resources available as efficiently as we can.

Mr. DEAN. We would like very much to submit a statement, Senator.

Chairman HATFIELD. Again I am not being critical of the existing situation except I am wanting to review so that I know. We have played a role in this. I think we should review those instructions to you, because I don't think we can, under any circumstances, justify from a fiscal management perspective the idleness of money at a time of great fiscal constraint. I don't think there is going to be any way in which we are going to lessen our commitment for those projects—the specific projects evidently earmarked for those carryover moneys. But I do think we have to review that situation in light of the fiscal problems that we face.

Mr. DEAN. We will submit a statement for the record explaining our interpretation of the the instructions that we have gotten in relation to these moneys.

[The statement follows:]

UNOBLIGATED CARRYOVER BALANCES

The Congress has very wisely, we believe, consistently appropriated TVA funds on a no-year limitation basis. This recognizes the problems inherent in estimating expenditures for the construction of large capital projects. Its safeguard against unwise yearend spending applies to expense-type programs as well.

As you can see from table 1, most of TVA's typical yearend amounts are small and varied in character. In the case of the capital items, these reflect the normal range of variations in schedule and cost estimates. In each case, TVA has chosen to carry the funds forward to the next year rather than spend them in a mad dash to beat the fiscal year clock.

As table 2 shows, and as we stated at the hearing, the bulk of TVA's carry-forward is consistently associated with large, complex capital projects. For instance, most of the carry-forward from 1982 into 1983 is associated with two projects—Columbia Dam and the coal gasification project at Murphy Hill, Ala.

With respect to Columbia Dam, the delays in spending amounts provided for the project since 1979 have all been associated with the required protection of an endangered species of mussels and water-quality-related proceedings. Two formal deferrals in 1979 and 1980 serve as evidence of the problem associated with spending on the project. While these problems are being resolved, TVA has endeavored to be conservative in spending this money until such time as the final status of this project is determined. As a result of this continuing uncertainty in 1982, the $10 million of funds associated with Columbia Dam were carried forward to 1983.

Congressional intent to insure that appropriated funds will be available for Columbia Dam, if and when these and any other legal questions are resolved, is evidenced by the language of support for the project in Senate Committee on Appropriations reports for fiscal years 1978 through 1982. Further evidence is provided by the special Columbia Dam appropriation account established by the Congress for fiscal year 1981.

The coal gasification project, while quite different in nature, presents similar issues for TVA with respect to unobligated balances.

This project was initiated with appropriations in 1980 and 1981, totaling $210 million. These funds were appropriated with the intent that they be the first stage of an appropriations-financed project which was estimated to require in excess of $1 billion. However, a rescission of $85 million in TVA's appropriated funds, which Congress approved in 1981, reflected a new congressionally established direction for the project. Congress directed TVA to use available funds budgeted for the project (approximately $125 million) to bring the project to the point where a consortium of private investors, with support from the Synthetic Fuels Corp., could assume responsibility for financing, construction, and operation of the project. The appropriations investment in the project is required to be repaid to the Treasury over the project life.

Consortium members representing 50 percent of the required equity have been identified as of this date. Negotiations with the Synthetic Fuels Corp. are continuing. During this period there has been considerable progress in site preparation, preliminary design, and process selection.

In these circumstances, prudent management and sensitivity to congressional intent that this project be turned over to the private sector in an orderly manner has dictated careful spending of these funds at a slower rate than originally expected and has resulted in $63 million carried forward from 1982 to 1983.

It should be pointed out that in both of these cases the funds have been carried forward to be applied to the projects originating the unobligated amounts. The balances have not been used as a source of funds for other projects or programs.

TVA is proud of its record of carefully and efficiently managing projects to their successful completion. We believe our management of these two particular projects is consistent with that tradition and in accordance with congressional intent.

TABLE 1

APPLICATION OF CARRY-FORWARD—ONGOING PROJECTS AND PROGRAMS

[In millions of dollars]

	1978	1979	1980	1981	1982
Capital investment:					
Pickwick lock	-1.2	0.1	-0.5	0.1	2.0
South Chickamauga Creek	3.2	1.7	.4		
Bear Creek	-.6	2.3	1.4	1.1	.2
LBL facilities	-.1		.9	.3	.1
Chemical facilities	-.2	1.2	.4		.5
Ammonia-from-coal facilities	.2	-.5	-.9	.6	.2
Additions and improvements at multipurpose facilities	4.8	.4	-.8	2.0	2.1
Total capital investment	5.2	5.1	.8	4.5	6.2
Operating expenses:					
Natural resources	2.4			.5	.9
Economic and community resources	.7	1.7		.2	.8
Agricultural resources development				.3	.2
National fertilizer development	-.1		-.3	.3	.5
National energy demonstrations	-.4				-.5
General services	.1			.7	.3
Total operating expenses	2.7	1.7	-.3	2.0	.6
Total	7.9	6.8	.5	6.5	6.8

TABLE 2

APPLICATION OF CARRY-FORWARD—MAJOR PROJECTS

[In millions of dollars]

	1978	1979	1980	1981	1982
Tellico Dam	4.1	1.3	13.3	5.3	1.7
Columbia Dam		17.1	19.0	16.7	10.2
Coal gasification			54.6	100.3	62.8
Total	4.1	18.4	86.9	122.3	74.7

SUMMARY REMARKS

Chairman HATFIELD. Any further comments or statements that you gentlemen wish to offer for the record today?

Mr. DEAN. No, sir. We certainly appreciate your consideration and that of Senator Stennis and Senator Sasser in taking time to hear our case.

We really are available anytime anyone on this committee would like to talk to us. We try to maintain a high level of availability to confer with those who are interested in TVA. We are all three on the move all the time. We would be delighted to come back at any time you would like.

Chairman HATFIELD. We appreciate that. We have found you to be most cooperative.

Next to Bonneville Power Administration, I know of no group that I like to deal with more. [Laughter.]

And I also want to thank you especially for your comments, Mr. Freeman, relating to the conservation programs.

I have to affirm your claim of great leadership by the TVA in the field of conservation. We have consulted through our facilities at TVA and our people at TVA with you on those programs.

You have been very helpful on them. We stand to reciprocate any time this committee can be helpful to you and facilitate your activities.

We are most anxious to do so. If there are no further——

TVA 50TH ANNIVERSARY CELEBRATION

Mr. DEAN. Senator Hatfield, one thing I want to be sure to mention.

We are having our 50th anniversary celebration on May 18. The way it looks now, Senator Baker is coming down as principal speaker. He probably will be on the plane. We would love to have you come along. I will affirm this in writing.

I think Senator Stennis and Senator Sasser have already been invited.

Chairman HATFIELD. I would enjoy very much to be with you folks and Senator Baker and all the good folks from Tennessee.

Mr. DEAN. One more thing. If you have a chance to get in the Kentucky area, we have an experimental fluidized bed combustion plant for generating power with high-sulfur coal over there we would like to show you. We are really excited about that. It is the wave of the future in the energy world.

SUBCOMMITTEE RECESS

Chairman HATFIELD. Thank you. I would like to take you up on that too.

We will recess until 2 p.m. tomorrow, when the subcommittee will review FERC and the Regulatory Commission budget request.

[Whereupon, at 3:30 p.m. Tuesday, April 12, the subcommittee was recessed to reconvene at 2 p.m. Wednesday, April 13.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, APRIL 13, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2 p.m. in room SD–124, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senator Hatfield.

FEDERAL ENERGY REGULATORY COMMISSION

STATEMENT OF C. M. BUTLER III, CHAIRMAN

ACCOMPANIED BY:
WILLIAM G. McDONALD, EXECUTIVE DIRECTOR
CHARLES A. MOORE, GENERAL COUNSEL

INTRODUCTORY STATEMENT

Chairman HATFIELD. The hearing will come to order.

Today, we will receive testimony from the Federal Energy Regulatory Commission and the Nuclear Regulatory Commission regarding their fiscal year 1984 budget request. The subcommittee has great interest in the programs and activities of both these regulatory agencies and we look forward to your testimony this afternoon.

As our first witness, we are pleased to welcome Mr. C. M. Butler, Chairman, Federal Energy Regulatory Commission.

Chairman Butler, as you know we ask you to summarize your statement and we will place your full statement in the record. If you would introduce your colleagues, we would be happy to have you proceed.

Mr. BUTLER. Thank you very much, Mr. Chairman, I have sitting on my right, Charles Moore, General Counsel to the Commission; on my left, William McDonald, Executive Director of the Commission.

Chairman HATFIELD. We welcome both of you gentlemen.

PREPARED STATEMENT

Mr. BUTLER. Mr. Chairman, I appreciate the opportunity to present the Commission's budget request for fiscal year 1984. I am submitting my formal statement for the record and in the interest of time, will deliver a summary statement.

[The statement follows:]

STATEMENT OF C. M. BUTLER III, CHAIRMAN

Mr. Chairman and Members of the Subcommittee. I appreciate this opportunity to present the Commission's budget request for Fiscal Year 1984. I would like to preface my remarks about our FY 1984 budget with an urgent request for your help in resolving a more immediate problem facing the Commission in FY 1983. As you know, both the Senate and House appropriations committees last year recommended a funding level of $89.1 million for FERC operations in the current fiscal year. Unfortunately, the Continuing Resolution, which now appears likely to prevail for the rest of FY 1983, provides FERC with only $76.8 million -- 14 percent less than recommended by the appropriations committees. The Commission simply cannot sustain a cut of this magnitude without serious consequences to its regulatory mission. Two-thirds of our budget is for salaries and benefits. The remainder provides administrative support for carrying out regulatory activities specifically required by law. There is little room for maneuvering. Without additional funding in the current fiscal year, our operations will have to be significantly curtailed. It will be nearly impossible to avoid hiring freezes, personnel furloughs, and the resulting serious delay in processing critical natural gas pipeline, hydro licensing, and electric rate cases.

The Commission can absorb approximately half of the 14 percent cut by foregoing its earlier plans to move to a new location and terminate the common support agreement with the Department of Energy. in FY 1983. While DOE has agreed to assume a portion of the Commission's fixed administrative expenses, we are still faced with a deficit of $3 million needed to cover costs associated with the FY 1983 pay increases. The Administration has recommended enactment of a supplemental appropriation in FY 1983 to meet this need. I urge this Subcommittee to support the Administration's request so that the Commission can continue to carry out its statutory responsibilities for the remainder of this fiscal year.

FY 1984 REQUEST

For Fiscal Year 1984 the Commission's budget request is for $94.6 million. This level of funding will support 1,742 full-time equivalent staff years and ensure the timely disposition of a workload consisting of 72,000 items.

The Commission's FY 1984 request is only $5.5 million higher than the $89.1 million funding level approved for FY 1983 by the appropriations committees last year. The apparent increase, however, is more than accounted for by FERC's assumption of $6 million in energy data support costs formerly incorporated in the budget of the Energy Information Administration.

One of my primary responsibilities as Chairman of the Commission is to ensure the timely processing of licenses, certificates, and rate change requests in the Hydropower, Natural Gas, Oil Pipeline, and Electric Rate Programs in accordance with the statutes and regulations governing Commission actions. Therefore, the Commission's budget request has been designed to support an aggressive workload processing plan. This plan has three basic management objectives: first, to develop and maintain a well-trained staff to review and process the workload in a timely manner; second, to augment that staff with outside technical expertise to perform the individual, specialized studies required under the law; and third, to initiate rulemaking and management improvements that will streamline the regulatory process, reducing both processing time and regulatory burden on industry.

The availability of a stable regulatory workforce is an essential prerequisite to the successful implementation of our operations plan. Therefore, 65 percent of this budget request is for salaries and benefits and associated fixed administrative and technical support. The remaining funds are required for operational travel and for contracts. A travel budget of $2.3 million is requested to carry out the Commission's audit and enforcement programs, keep pace with the expanding hydroelectric industry, and provide limited regional hearings. The Commission's request also includes $11.2 million for contractual services which provide specialized technical support and management improvements needed to streamline and simplify the regulatory process.

I would like to submit for the record a table which displays the impact which this operations plan will have on the projected workload of the Commission for FY 1983 and FY 1984. Pending workload in FY 1984 will be reduced by more than 10,000 items from the level at the end of FY 1982. Although pending workload at the end of FY 1982 increased by 7 percent from the FY 1981 level, this anomaly resulted from two factors: first, a large influx of natural gas wellhead price determination cases which were received late in FY 1982 and have since been completed; and second, a large number of oil pipeline rate cases which were held in abeyance pending a precedent-setting decision in the Williams Pipe Line Case. A Commission decision on the Williams case, issued in November 1982, has effectively eliminated the backlog of these oil pipeline rate cases.

MANAGEMENT INITIATIVES

During FY 1984, the Commission will continue to implement several management initiatives aimed at improving the efficiency of our operations as well as reducing the regulatory burden on industry. Specifically, these initiatives will eliminate unnecessary reporting requirements and streamline filing procedures; enhance operational efficiency through improvements in methods of recordkeeping and the accessibility of records; and ensure continued progress toward eliminating the backlog of casework.

The Commission's efforts to reduce the regulatory burden on industry have resulted in the elimination or reduction of 71 forms, applications, and other paperwork requirements. Nine additional forms have been targeted for future reduction. These efforts have resulted in an annual savings to industry of nearly 2,000 workyears or $58 million. A major program which we expect to complete during FY 1984 is the review of the Commission's reporting requirements. This program, begun in FY 1979, has been highly successful. We anticipate that, by the end of FY 1984, the reporting burden on regulated industries will be reduced by 50 percent from the level which prevailed in FY 1979.

The Commission will also continue to streamline its filing procedures. For example, in the hydroelectric area, filing requirements have been greatly simplified for projects of less than 5 megawatts. We have issued a rulemaking to establish blanket certificate procedures for certain sales and transportation of natural gas by interstate pipelines. This would allow the pipeline companies to transport and sell certain supplies of natural gas without having to file for and receive Commission approval on each individual transaction.

In addition, on August 24, 1982, the Commission approved a final rule which implemented the first phase of our effort to reduce the records retention requirements imposed on industry. Reductions of approximately half a million hours are planned in a second phase proposal.

For FY 1984, funds have been requested to complete our automated information systems. Designed to improve both recordkeeping and the accessibility of records, these systems will contribute greatly to enhancing our operational efficiency by providing automated access to more than two million pages of filings and correspondence received annually. First, our Records Information Management System (RIMS) is an integrated micrographic and computer system designed to replace the outdated and inefficient manual methods of filing and recordkeeping. This system became operational in April 1982. By the end of the fiscal year, we will have completed the indexing of all Commission documents and will install user terminals throughout the Commission.

Second, our legal precedent indexing system (LEXIS) permits automated research by staff attorneys through quick access to lead cases and Commission orders, opinions, and decisions. This system is operational and offers full-text legal retrieval to both the government and the private sector. During FY 1984, the Commission will procure and install additional LEXIS terminals as well as complete training of personnel in the use of the LEXIS system. Both systems will provide staff with rapid retrieval capabilities which will result in the more efficient utilization of Commission resources for case processing.

The Commission will continue to implement new procedures to manage the workload. Toward this goal, I have approved the delegation of decisionmaking authority in several areas from the full Commission to individual Office Directors. These delegated items involve routine, noncontroversial matters that can be processed more efficiently by Office Directors than by the Commission's formal decisionmaking process. The Commission will continue to examine additional items which may be delegated in FY 1984.

Each of these management initiatives is an integral part of the FERC operations plan for FY 1984, and will contribute significantly to improving our processing procedures in the four program areas which I will briefly outline for you.

HYDROPOWER REGULATION

A total of $24.7 million is requested in FY 1984 to support the Hydropower Regulation Program. Under this program, the Commission has licensed more than 1,200 operating hydropower developments. These developments produce 287 billion kilowatt-hours of electricity annually, which is equivalent to 540 million barrels of oil or 135 million tons of coal.

The two major functions of this program, project licensing and dam safety inspection, reflect the principal growth in the Commission's workload. The continued growth of the hydropower program is attributable to the passage of legislation such as the Public Utility Regulatory Policies Act, the Energy Security Act, and the Crude Oil Windfall Profit Tax Act, which serve to stimulate the development of hydroelectric projects. Legislative incentives such as these, coupled with the economic advantages of hydropower, have resulted in a tenfold increase in preliminary permit filings for future hydroelectric construction since FY 1979. The current forecast for preliminary permits indicates that the FERC will receive approximately 600 permit applications in FY 1984.

Although a preliminary permit does not always result in a subsequent application for a project license, there has been a close correlation between permit and license applications. Statistics have shown that approximately 50 percent of all preliminary permits issued result in applications for license for new capacity or exemptions from licensing. Due to the volume of preliminary permits issued in recent years, there will be significant increases in the more complex and staff-intensive applications involving new capacity licensing. There were 263 new capacity and license amendment applications processed in FY 1982 compared to only 73 in FY 1980. This licensing activity is expected to increase to 336 in FY 1984, a 360 percent increase over FY 1980.

Since new capacity license applications take approximately five times the resources to process compared to preliminary permits, these license applications will require a significant part of the overall resources dedicated to the Hydropower Licensing Program.

In FY 1984, the Commission will also be conducting licensing reviews of several unusually large and complex hydropower projects. These include the proposed Alaska Power Authority's license application for the $5 billion Susitna project, which will be one of the larger hydroelectric facilities in the United States, and the $500 million expansion of the Niagara Power Project. The Susitna project consists of two developments with an installed capacity of 1,620 MW. Because of the considerable staff resources that will be required to complete action on this application, a special project office has been established to ensure an orderly and timely licensing review. Any licensing delays that hinder construction could raise project costs by more than $1 million per day. The Niagara Power Project, to be submitted by the Power Authority of the State of New York, will include three additional 150 MW units at the Robert Moses Niagara Power Plant and three additional 20 MW units at the Lewiston Pump Generating Plant. Most of the construction on the Niagara Project will be underground, with an estimated construction time of four years.

With this growing number of hydroelectric projects comes an additional requirement for dam safety inspections, particularly construction and prelicense inspections. The Commission's hydropower dam safety inspection program ensures that licensed projects under our jurisdiction are adequately constructed, operated, and maintained. We currently have authority over 1,400 hydroelectric developments, licensed or authorized for construction, and anticipate this workload to include more than 1,530 developments in FY 1984, a 47 percent increase over FY 1982. This will require an estimated 2,100 inspections during the budget year. The loss of life and property damage consequences of a dam failure make the dam safety inspection program a vital part of our hydropower regulation effort.

NATURAL GAS REGULATION

To support the Commission's natural gas regulation responsibilities in FY 1984, we are requesting $43.5 million. The Commission is responsible for the regulation of over 8,500 natural gas producers and 148 natural gas pipelines. Passage of the 1978 Natural Gas Policy Act (NGPA) extended the Commission's jurisdiction to previously exempt intrastate gas and directed the Commission to administer various ceiling prices for certain categories of natural gas production. Some wellhead prices are already deregulated under the NGPA, and others are scheduled for deregulation in January 1985, and in January 1989. The price ceiling for regulated gas at the wellhead is dependent on reservoir characteristics, drilling commencement dates, pre-NGPA prices, contract commitments, and other non-market factors.

With the funds requested for this program, the Commission will conduct biannual inspections of all operating jurisdictional LNG facilities to ensure that all safety standards are met; process the increased number of new applications in the import/export area resulting from the recent Canadian National Energy Board decision and anticipated activity in both Mexico and Canada; investigate and, where necessary, litigate alleged violations of the NGA and NGPA, Outer Continental Shelf Lands Act, and other rules and regulations; analyze proposals for new pipeline construction, underground storage developments, LNG facilities and related projects; analyze the movement of natural gas between interstate and intrastate markets; assure that natural gas is sold in compliance with the statutorily established maximum lawful prices; and formulate policies to encourage the exploration and development of new reserves of natural gas.

The economic effects of partial decontrol of wellhead gas prices under the NGPA guidelines will continue to demand close attention and analysis in FY 1984 as the Commission attempts to implement an orderly transition into the post-1985 period. The market-ordering problems which are inherent in the NGPA have now been complicated by a decline in demand largely the result of price-induced conservation, lower fuel oil prices, and the state of our economy. These problems will become more acute unless prices are allowed to react to the realities of the marketplace. In general, the Commission must ask whether it may be necessary to modify its regulation of gas pipelines to assure a clear communication of market signals between consumers and producers. In particular, the Commission will be reevaluating its policies regarding pipeline rate design, pipeline gas purchasing practices, its certification of gas sales and transportation, and other relevant issues.

OIL PIPELINE REGULATION

Our request to support the Commission's oil pipeline regulation activities is $6.7 million. Commission jurisdiction in this area is limited to regulating the rates and practices of 147 common carrier oil pipeline companies which transport oil in interstate commerce. With the requested funding in FY 1984, the Commission will be able to encourage expansion of oil pipeline systems; adjudicate complaints by shippers and consumers who claim to be adversely affected by unjustifiably high tariffs; and resolve the long-pending rate case involving the Trans Alaska Pipeline System.

In an order issued in January 1980, the Commission designated the Williams Pipe Line Company and the Trans Alaska Pipeline System (TAPS) rate proceedings as "lead cases" for the purpose of determining the ratemaking methodology that is appropriate for this industry under current economic conditions. On November 30, 1982, Opinion 154 was issued by the Commission on the Williams Pipe Line Company case. This opinion determined the ratemaking methodology that the Commission will use in oil pipeline rate cases.

Essentially, the Commission made certain modifications to the basic ratemaking methodology which the Interstate Commerce Commission (ICC) utilized for the oil pipeline industry. The opinion contained an administrative determination which stated "pending oil pipeline rate investigation and suspension dockets should be resolved expeditiously" and instructed staff "to bring these dockets before the Commission forthwith." In response to this directive, the Commission issued an order on December 21, 1982, which virtually eliminated all suspended cases, with the exception of the TAPS and Williams Pipe Line Company cases, and a few others in which settlement talks are now in progress.

However, I must point out that appeals of the Commission's decision in the Williams case are now pending. These appeals have been filed by both the complaining shippers and the affected carriers. I cannot predict their outcome, but it is conceivable that these appeals may lead to judicial decisions that would require higher funding levels for this area.

In the TAPS case, the Commission approved the settlement of the depreciation issue in Phase II of this proceeding during FY 1982. The Phase II hearing began on February 24, 1982, and I am optimistic that this hearing can be completed during the first quarter of FY 1984. In addition, I am optimistic that all issues in PHASE I and II of the TAPS proceedings can be resolved in the relatively near future through settlement or adjudication.

ELECTRIC POWER REGULATION

Our FY 1984 request for the Electric Power Regulation Program is $19.7 million. Funds requested in FY 1984 for this program will be used to establish just and reasonable rates for the transmission and sale for resale of electric power by 214 public utilities in interstate commerce; assure that rates charged by the Federal

Power Marketing Administrations conform to certain statutory requirements; certify cogeneration and small power production activities; and, to streamline and simplify existing regulations and procedures.

This funding level will provide for the completion of over 1,600 workload items including the review of 350 qualification and exemption applications to increase cogeneration and small power production from renewable resources, and the review of 971 public utility rate filings. It is anticipated that the pending workload in the electric power program will be reduced by 7 percent from the FY 1982 year-end level.

The primary activity of the Electric Power Regulation Program is to determine rates for the transmission and sale at wholesale of electric power. These sales comprise approximately 15 percent of total U.S. electricity sales. In FY 1984, we anticipate the same high level of rate increase requests from utilities as in recent years. Specifically, projections for FY 1983 and FY 1984 indicate that 1,600 rate filings amounting to $850 million will be reviewed by the Commission each year.

The Commission's involvement in the review of Federal rates has increased in recent years. In response to language in the House Appropriation Committee's report on the Commission's FY 1983 budget request, the Commission established a special task force with representatives from FERC, DOE, and the Power Marketing Administrations to develop procedures for the timely review of Federal rate cases. The task force completed its negotiations, and their recommendations are pending before the Department, the Commission, and the Power Marketing Administrations. The task force proposal defines the specific roles of each organization, provides a list of filing requirements, refines the DOE delegation of authority limiting FERC review to the Federal investment payback issue, and establishes key milestones for the Commission to review these applications within a six-month time frame. The Commission will continue to review both interim and final rate requests for the Bonneville Power Administration under the authority of the Pacific Northwest Electric Power Planning and Conservation Act.

Several issues related to the electric utility industry will be addressed by the Commission in FY 1983 and 1984. The question of whether to allow utilities to include construction work in progress in their rate base is being addressed in a pending rulemaking at the Commission. We expect to complete this rulemaking during the first half of FY 1983. A Supreme Court decision later this year is expected to clarify the rate at which electric utilities must purchase energy from cogenerators and small power producers as well as establish interconnection requirements for both utilities and qualifying facilities.

CONCLUSION

The FY 1984 budget request which I have presented today will allow the Commission to discharge its legislatively mandated responsibilities and to tackle the complex energy problems affecting our Nation.

As Chairman of the Federal Energy Regulatory Commission, one of my goals has been to eliminate the backlog of cases which existed when I was appointed to this position. As illustrated in the workload summary I have submitted for the record, there will be a 42 percent reduction in pending workload from FY 1982 to FY 1984. I am happy to report that during the first quarter of FY 1983, pending workload was reduced by 14% or 3,250 cases. Therefore, I feel our FY 1984 workload completion goal is both realistic and obtainable.

As I stated at the outset of this hearing, our ability to meet our FY 1984 goal and pursue other program initiatives is contingent upon the financial solvency of this Commission in FY 1983. Without additional funding, I will be forced to curtail FERC operations before the end of the current fiscal year. I urge the Subcommittee's prompt approval of the Commission's FY 1983 supplemental request for $3 million.

I appreciate the opportunity to testify before you today, and I would be pleased to answer any questions you have at this time.

FEDERAL ENERGY REGULATORY COMMISSION
Workload Summary*

	RECEIPTS						WORKLOAD						COMPLETIONS						PENDING AT END OF FY						
	Actual				Estimate		Actual				Estimate		Actual				Estimate		Actual					Estimate	
	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84
Hydropower Licensing	331	861	2,436	2,082	1,772	1,864	972	1,468	3,209	3,437	3,087	3,041	357	882	1,824	2,122	1,700	1,660	641	616	774	1,385	1,316	1,387	1,481
Dam Safety	1,177	1,229	1,283	1,435	1,730	2,086	1,177	1,229	1,283	1,435	1,730	2,086	1,177	1,229	1,283	1,435	1,730	2,086	0	0	0	0	0	0	0
Electric Power	674	1,108	1,340	1,441	1,530	1,430	1,288	1,580	2,030	2,158	2,080	2,029	936	870	1,313	1,097	1,498	1,597	614	402	680	717	961	601	622
Securities	78	90	88	80	100	100	89	107	105	98	110	110	72	90	87	88	100	100	11	17	17	18	10	10	10
Producer Rates	7,213	4,703	3,611	3,666	3,441	3,225	17,659	8,338	5,609	5,409	4,603	4,220	14,024	6,240	3,966	4,247	3,578	3,301	10,446	3,635	2,398	1,743	1,162	1,025	939
Producer Certificates	1,492	1,006	906	931	785	690	4,616	3,320	1,607	1,313	1,056	923	2,302	2,619	1,725	1,042	823	752	3,124	2,314	701	382	271	233	171
Oil Pipeline	2,026	2,236	3,380	3,793	3,465	3,415	2,176	2,416	3,981	5,513	6,281	3,723	1,996	1,617	2,241	2,697	5,883	3,435	150	180	801	1,720	2,816	398	288
Pipeline Certificates	945	1,191	1,060	1,067	960	904	1,642	1,998	1,663	1,698	1,477	1,384	925	1,374	1,161	1,118	987	984	697	617	624	542	481	490	410
Pipeline Rates	1,282	1,722	1,690	1,894	1,689	1,610	1,577	2,193	2,084	2,332	2,198	2,088	1,106	1,799	1,646	1,823	1,720	1,646	295	471	394	438	509	478	442
Subtotal	15,418	14,218	15,652	16,140	16,440	15,102	31,296	22,729	21,601	23,294	22,681	19,034	22,785	16,209	14,856	16,150	18,049	15,461	15,878	8,511	6,890	6,945	7,135	4,632	4,173
Wellhead Pricing	23,423	68,092	61,118	62,342	61,600	63,600	23,423	74,866	73,317	78,032	78,636	80,089	16,649	62,667	57,627	60,997	62,386	67,126	0	6,774	12,199	15,690	17,036	13,289	9,744
Total	38,841	82,310	76,730	78,481	74,040	68,702	54,719	97,595	94,918	101,326	98,216	86,893	39,434	78,467	72,183	77,169	80,416	72,886	15,878	16,285	19,090	22,635	24,170	17,891	13,917

*Note: Data for FY 1983 and FY 1984 are projected based on December 31, 1982, edition of the Management Information System Report.

January 14, 1983

FISCAL YEAR 1983 FUNDING PROBLEM

Mr. BUTLER. I would like to preface my remarks about our fiscal year 1984 budget with an urgent request for your help in resolving a more immediate problem facing the Commission in fiscal year 1983. The continuing resolution, which now appears likely to prevail for the rest of fiscal year 1983, provides FERC with only $76.8 million—14 percent less than the $89.1 million that was recommended by the Appropriations Committees. Without additional funding in the current fiscal year, it will be impossible to avoid hiring freezes, personnel furloughs, and the resulting serious delay in processing critical cases. The Commission will absorb approximately half of the 14-percent reduction by foregoing the move to a new Washington, D.C., location and delaying the assumption of common support functions from the Department of Energy until fiscal year 1984. While the Department will provide partial relief in the form of a $3.3 million reduction in our administrative services bill, we still face a deficit of $3 million as a result of costs incurred by the fiscal year 1983 pay increases. The administration has recommended enactment of a pay supplemental appropriation in fiscal year 1983 to meet this need. I urge this subcommittee to support the administration's request so that the Commission can continue to operate and carry out its statutory responsibilities for the remainder of this fiscal year.

FISCAL YEAR 1984 BUDGET SUMMARY

The Commission's budget request for fiscal year 1984 is for $94.6 million. This level of funding will insure the timely disposition of a workload consisting of 72,000 docketed items. At the requested funding level, pending workload in fiscal year 1984 will be reduced by more than 10,000 items, or 42 percent, from the level at the end of fiscal year 1982. The Commission's fiscal year 1984 request is only $5.5 million higher than the $89.1 million funding level approved for fiscal year 1983. The apparent increase, however, is more than accounted for by FERC's assumption of $6 million in energy data support costs formerly incorporated in the budget of the Energy Information Administration.

Based on late information furnished by the Treasury Department, the appropriations language proposed in the budget must be revised to insure that the Commission receives full appropriation authority for $94.6 million at the start of fiscal year 1984. I have been assured that both OMB and Treasury officials will work with the subcommittee to remove any ambiguities in the FERC appropriation language.

During fiscal year 1984, the Commission will continue to implement several management initiatives aimed at improving the efficiency of our operations as well as reducing the regulatory burden on industry. Specifically, these initiatives will eliminate unnecessary reporting requirements and streamline filing procedures; enhance operational efficiency through improvements in methods of recordkeeping and the accessibility of records; and insure continued progress toward eliminating the backlog of casework.

I would now like to briefly describe the Commission's plans in each of the major program areas: hydropower, natural gas, oil, and electric power regulation.

HYDROPOWER REGULATION PROGRAM

A total of $24.7 million is requested in fiscal year 1984 to support the hydropower regulation program. The two major functions of this program—project licensing and dam safety inspection—reflect the principal growth in the Commission's workload. Legislative incentives, coupled with the economic advantages of hydropower, have resulted in a tenfold increase since fiscal year 1979 in preliminary permit filings for future hydroelectric construction. Statistics show that approximately 50 percent of all preliminary permits issued result in application for license for new capacity or exemptions from licensing. Since new capacity license applications take approximately five times the resources to process compared to preliminary permits, these license applications will require a significant part of the overall resources dedicated to the hydropower licensing program. New capacity license receipts are expected to total 336 in fiscal year 1984—three and one-half times the fiscal year 1980 total.

A major Commission effort in fiscal year 1984 will be the review of several unusually large and complex hydropower projects. These include the proposed Alaska Power Authority's license application for the $5 billion Susitna project and the $500 million expansion of the Niagara power project.

Resulting from the growing number of hydroelectric projects is the additional requirement for dam safety inspections, particularly construction and prelicense inspections. The Commission's hydropower dam safety inspection program insures that licensed projects under our jurisdiction are adequately constructed, operated, and maintained. The loss of life and property damage consequences of a dam failure make the dam safety inspection program a vital part of our hydropower regulation effort. In fiscal year 1984 over 2,000 inspections will be completed.

NATURAL GAS REGULATION PROGRAM

To support the Commission's natural gas regulation responsibilities in fiscal year 1984, we are requesting $43.5 million. These funds will enable us to process almost 64,000 actions and reduce pending workload by 25 percent from the fiscal year 1983 level and 40 percent from the level at the end of fiscal year 1982.

The economic effects of partial decontrol of wellhead gas prices under the NGPA guidelines will continue to demand close attention and analysis in fiscal year 1984 as the Commission attempts to implement an orderly transition into the post-1985 period. The market-ordering problems which are inherent in the NGPA have now been complicated by a decline in demand largely the result of price-induced conservation, lower fuel oil prices, and the state of our economy. These problems will become more acute unless prices are allowed to react to the realities of the marketplace. In general, the Commission must ask whether it may be necessary to modify its regulations of gas pipelines to assure a clear communication of market signals between consumers and producers.

As I stated at the outset of this hearing, our ability to meet our fiscal year 1984 goals and pursue other program initiatives is contingent upon the financial solvency of this Commission in fiscal year 1983. Without supplemental funding, I will be forced to curtail or discontinue FERC operations before the end of the current fiscal year. I urge the subcommittee's prompt approval of the Commission's fiscal year 1983 supplemental request for $3 million.

I appreciate the opportunity to testify before you today, and I would be pleased to answer any questions you have at this time.

COMMISSION PRODUCTIVITY

I would like to add one thing that is not contained in the summary of these remarks; that is, that we have ongoing at the Commission right now a GAO study of the productivity of the Commission over the last several years. The preliminary indications are that we will have achieved approximately a 10-percent productivity increase over the past 2 years. The loss of the supplemental appropriations which would, in turn, result in adverse personnel actions obviously would have some fairly severe implications in respect to our ability to continue with what appears to be a fine record on the part of the staff in improving the productivity of the Commission overall. I appreciate the opportunity to present the testimony, Mr. Chairman, and will be pleased to answer any questions you may have.

FISCAL YEAR 1983 SUPPLEMENTAL REQUEST

Chairman HATFIELD. Chairman Butler, the committee is fully aware of the fact that you are operating your fiscal year 1983 operations considerably below your requested level of the continuing resolution; level of funding and so forth. We understand your problem. I can assure you that we will be sympathetic in looking at your pay supplemental increase for 1983.

Mr. BUTLER. I am most grateful, Mr. Chairman.

FISCAL YEAR 1984 REVENUES FROM FEES

Chairman HATFIELD. In your 1984 budget request, I see a figure of some $60 million, which you anticipate will be collected from user fee and other licensing fees.

Let me ask, in your opinion, do you feel that you have the sufficient authority at this time to collect fees at that level of revenues?

Mr. BUTLER. Mr. Chairman, there are ambiguities both in the text of the statute—that is, the Independent Offices Act—and also in the precedents that have come out under that statute. In all candor, I think that the Commission probably is testing the frontiers of this authority in the fee-collection process. However, we intend to make every effort to reach our target level through the imposition of reasonable user fees.

Chairman HATFIELD. Do you think it would be advisable to have legislation developed to clarify this whole matter of ambiguities that you refer to?

As I stated at the outset of this hearing, our ability to meet our fiscal year 1984 goals and pursue other program initiatives is contingent upon the financial solvency of this Commission in fiscal year 1983. Without supplemental funding, I will be forced to curtail or discontinue FERC operations before the end of the current fiscal year. I urge the subcommittee's prompt approval of the Commission's fiscal year 1983 supplemental request for $3 million.

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Mr. BUTLER. Yes, sir, I do.

Chairman HATFIELD. Are you in the process of doing that?

Mr. BUTLER. We have submitted again this year suggested legislative amendments that would resolve some of the ambiguities.

Chairman HATFIELD. Could you tell us what your current estimate of the revenues that could be collected in fiscal year 1984? Provide that for the record, or how much from each activity.

Mr. BUTLER. I am advised, Mr. Chairman, that we estimate the total to be over $50 million.

Chairman HATFIELD. $50 million?

Mr. BUTLER. Yes, sir.

Chairman HATFIELD. Could you break that down for us by the function?

Mr. BUTLER. Yes, we will be happy to do that and provide it for the record.

[The information follows:]

FISCAL YEAR 1984 COLLECTIBLE REVENUES

The current estimate of revenues that can be collected in fiscal year 1984 is $56,250,000. Estimated revenues from each activity are as follows:

Fiscal year 1984 estimated revenues

Program	
Office of Pipeline and Producer Regulation:	
Pipeline certificates	$7,500,000
Pipeline rates	3,300,000
Producer certificates	1,000,000
Producer rates	1,200,000
Wellhead	3,750,000
Oil	1,500,000
Office of Electric Power Regulation:	
Hydropower	22,000,000
Dam safety	
Electric rates	6,000,000
Subtotal	46,250,000
Other	[1] 10,000,000
Total	56,250,000

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[1] Other moneys collected includes: Headwater benefits, annual charges navigable water, annual dam reclamation, annual public lands returned to States, Oregon and California land grants, and annual Indian tribes.

FEDERAL RATE REVIEWS

Chairman HATFIELD. I have a question that Senator Garn wanted me to present to you relating to rates. The question is as to your agency or what appears to be an emerging position to allow the agency to continue to review whether rates are too low for the Southeastern Power Administration, Southwestern Power Administration, and Alaska Power Administration. There has been some indication there may be a move to eliminate, limit or otherwise change your agency's review of the Western Area Power Administration so that effectively only the question whether the rates are high enough would be scrutinized. Or at least Western rates would be treated differently from the other Power Administrations. Bonneville Power Administration, of course, is governed by an entirely different statute. But Bonneville aside, why should ratepayers for Western have any different degree of protection against successor rates of customers in Southeastern, Southwestern, or Alaska?

Mr. BUTLER. The answer to the question, Mr. Chairman, is that with respect to all the Power Administrations, except for Bonneville, the Commission traditionally has looked at the question not only of whether the rates are too high, but also are the rates too low and how should rate design be applied to the revenue requirements that are found appropriate for the Power Marketing Authority. It has led the Commission into considerable difficulty. We have, in effect, been whipsawed in my judgement by the desire of the Congress to have us take a look at those kinds of questions and the absense of the authority on the Commission's part to direct the setting of the level of rates. The consequence is that all we can do under existing law for any of the power authorities is to deny a rate application if we are dissatisfied with it. The dilemma that we find ourselves in is that if we do that and the rate filing provides for an increase, it means that the return to the Federal Treasury is going to be lower. On the other hand, our choice is to allow the increase and a higher level of revenue to the Federal Treasury but still be dissatisfied. We have no authority to set the rates and that creates a problem for us. The result has been that over the last several months we have explored, with the Department of Energy, a position that says that since the Commission is, in effect, unable to satisfactorily resolve disputes over levels of rates, that the Commission simply does not want to be in the position of having the finger pointed at us for not doing our job when in fact, under the law, we are not able to do our job. So the resolution that we reached was one in which the Department of Energy or the Secretary of Energy would rescind the delegation under the DOE Reorganization Act that was issued following the passage of that statute granting some rate authority to the Commission.

The power marketing authorities themselves would propose rates after extensive local hearings with full public and customer participation. The Secretary of Energy, or a proper designee, would approve the rates on an interim basis, and the Commission would review them only to determine whether or not they were high enough to amortize the Federal investment in the project. From my own standpoint, it is immaterial to me which way Congress might decide to go. If Congress wants the Commission to establish rates for the power marketing authorities, look at the questions of rate design, and whether the rates are set too high, from the consumer protection standpoint, it seems to me that we need to have additional authority to implement the rate decisions that the Commission makes.

Chairman HATFIELD. As I understand it, the selectivity of your actions is on the basis of your original capabilities as presently staffed and so forth, primarily to conduct that rate review program. Is that what I hear you say?

Mr. BUTLER. No sir, not exactly. There is no question that the staff that is allocated to review Power Marketing Administration rates is relatively small because it makes up a relatively small portion of our workload. What I am saying is that the Commission has no ability under existing law to enforce decisions that it makes with respect to rate applications.

WESTERN AREA POWER ADMINISTRATION RATE REVIEWS

Chairman HATFIELD. I think though, that Senator Garn's question was, are you treating one authority differently than other authorities? The impression, I think, is that the Western Authority is being treated a little differently than the Southeastern and Southwestern and the Alaska Authorities.

Mr. BUTLER. That is not the case, although I think that I can identify why such a perception may exist. The Western Area Power Market Authority is the youngest of the PMA's, and with respect to the others there seems to have developed over time, a little better relationship between the staffs of those PMA's and the Commission. In addition, WAPA's accounting practices are considerably different from those of the other Power Marketing Authorities and there has been some difficulty in communication between the staffs of WAPA and the FERC. I think that recent meetings have been successful in eliminating much of that difficulty. There is, however, an ongoing problem with respect to the system of accounting that WAPA uses. I might, in that connection, refer the subcommittee to comments that were made in the recently circulated Grace Commission report that was chartered by the President to look at various Federal agencies. There is a reflection in there that the accounting methods used by all the Power Marketing Administrations are substandard. They vary considerably; for example, from the uniform system of accounts that the Commission imposes on investor-owned utilities that it regulates.

Chairman HATFIELD. I wonder if you could supplement your testimony for the record with perhaps a little clearer understanding for me, at least, to the crux of the question. If there are administrative procedures or practices that are creating some kind of a difficulty here, how soon we can get them straightened out. I think again, that we are not looking so much at the relationship between your agency and these power marketing groups in this question as much as we are looking at the services being rendered to the constituency by persons within each of these power marketing accounts. Senator Garn, I think, is concerned that perhaps the Western Power Marketing account constituency are not receiving the same kind of protection or review that would be an ultimate protection as the other PMA's are.

Mr. BUTLER. What I might suggest is this: We have underway right now, Mr. Chairman, the development of a memorandum which goes into some detail about the FERC's area of concern with the PMA's. It should provide the subcommittee with a fairly systematic analysis of the problems as we see them. I would be the first to admit that some fault probably lies with the commission staff, and some part probably is on the part of the Power Marketing Authorities. We probably could ask the Congress for some help in resolving some of the disputes.

RELOCATION OF COMMISSION OFFICES

Chairman HATFIELD. I am sure Senator Garn would appreciate that. If there are problems there that in any way encumber your program and we can be helpful, we would be very happy to respond. We have other questions, Chairman Butler, that I would like to have submitted to you for the record. But before I conclude, there is one last procedural question I would like to ask. In the last year's budget testimony you indicated the importance of the proposed relocation of your Office, the Commission's Office.

Would you give us an update, elaborate a little bit on the problem and are any funds included in the fiscal year 1984 budget request for this purpose?

Mr. BUTLER. Mr. Chairman, there is a funding request in the fiscal year 1984 budget request that would include moving the agency. I continue to believe that it is imperative and in the best interests of the personnel that work at the agency to move the Commission. There has been a fair amount of notariety recently in the news media in connection with problems in and around the area in which the Commission is currently located, and any assistance that we could receive from the Congress would be very much appreciated.

I would make one observation in that connection; that is, that last year in our efforts to move, we were finally frustrated at the GSA level. I think it was probably a national decision, that we didn't need to move as badly as some others did.

Mr. Chairman, I need to amend my answer. I am advised that OMB asked us to take the funds for moving out of the fiscal year 1984 request. So they are not included.

Chairman HATFIELD. You have the initial request for that?

Mr. BUTLER. Initially it was considered, but after discussions with GSA and OMB, the decision was made not to include funding for the move in our fiscal year 1984 request.

Chairman HATFIELD. Let's just talk about this for a minute. We are not in the business of committing more than we would be able to go around or over OMB [laughter], still cooperating in the general objectives. What kind of importance do you place on the consolidating or the relocating FERC operations? Is there something we should seriously talk about in terms of trying to support you?

Mr. BUTLER. I think that it is crucially important, Mr. Chairman. The facts of the matter are that we have an extraordinarily high attrition rate at the Commission largely due to the fact that it is a dangerous place in which to work as I am sure you are aware. There was an employee shot and killed in the GPO parking lot, immediately diagonal to the building just a month or so ago.

My recollection is that November 4 was a great day for four's because there were four bodies found within four blocks of the Commission on November 4. There have been a rash of assaults; we have had robberies at the Commission; and a number of other problems related to the location. That impacts obviously on the morale of the people who work there.

Additionally, the Commission is spread out over several locations that result in a number of additional expenses. We have messengers running back and forth, problems of records transfer, problems of things being lost, and so forth, simply because of the fact that we are not in one location. So I think the problem is a serious one. I think moving would be of great benefit to the Commission, the people working there, and to the public interest we are supposed to serve.

Chairman HATFIELD. How long would it take you to accomplish this if, let's say, we made that decision today and you had the wherewithal to move? How long would it take you to make this relocation?

Mr. BUTLER. First we would have to find a building into which to move. I don't know what the availability is, but that would probably be the primary constraint.

Chairman HATFIELD. Immediate availability?

Mr. BUTLER. Yes, sir. If we were able to find adequate quarters to consolidate the entire Commission I think we could probably effect the move in a relatively short period of time.

Chairman HATFIELD. Chairman Butler, why don't you, at my request, provide the committee with a statement of cost estimates that would be required to allow you to consolidate and relocate.

Mr. BUTLER. We will be happy to provide the information.

Chairman HATFIELD. Give us that information in terms of fiscal year 1984—in the meantime you can do some quick checking to find out availability of buildings and so forth. We would like to know whether or not it would be practical to even consider amending your fiscal year 1984 request to undertake that. But if you could give us that information it would be very helpful—you have indicated that you consider it crucial and I think that, based on my own knowledge of the problems, that I share your concern about the area and the safety of your employees.

Mr. BUTLER. We appreciate that, Mr. Chairman and we would be most happy to provide that information for you.

[The information follows:]

The Commission's fiscal year 1983 congressional budget request contains $4.7 million to move and consolidate the FERC into a single building. Approximately $3.5 million, or 60 percent, of the amount requested would be used for additional rent. This amount is based on a lease rate of $23 per square foot. The remaining $2,240,000 would be a one-time cost for moving and construction. While these estimates were developed almost 18 months ago, they have probably increased less than 5 percent, which would revise our estimate to approximately $5 milllion.

It is important to note that the General Services Administration has raised the Commission's rental rates on our present four buildings in fiscal year 1984, and the Commission will pay an additional $2 million just to stay in its present location. This increase in the GSA rates reduces the incremental annual cost of moving to a new and safer location to approximately $1.5 million.

ADDITIONAL SUBMITTED QUESTIONS FOR THE RECORD

Chairman HATFIELD. Thank you very much. We will submit other questions.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR HATFIELD

Federal Energy Regulatory Commission User Fees

Question: What has the Commission done to date under existing authority to increase fees?

Answer: Under existing authority the Commission has issued six Notices of Proposed Rulemaking (NOPR). The rulemakings are as follows:

RULEMAKING	NOPR ON AGENDA	NOPR ISSUED	COMMENTS RECEIVED
RM82-30-000 (NGPA)	02/11/82C	06/02/82C	08/13/82C
RM82-35-000 (General)	03/23/82C	06/15/82C	08/23/82C
RM82-25-000 (Producers)	04/28/82C	05/06/82C	08/05/82C
RM82-31-000 (Pipeline Certs)	05/26/82C	09/10/82C	11/09/82C
RM82-38-000 (PURPA & Elec.)	08/24/82C	09/01/82C	11/01/82C
RM83-2-000 (Pipeline Rates)	11/10/82C	12/15/82C	02/14/83C

Additionally, a proposed hydroelectric NOPR is to be scheduled for the Commission's agenda within the next two months. It is estimated that final rules will be phased in during FY 1984.

Question: Do you now have authority to collect fees or revenues and directly offset program costs?

Answer: No, the Commission does not have the authority to collect fees or revenues to directly offset program costs. Any fees or revenues collected are returned to the U. S. Treasury.

Question: What is the basis for the $60 million in estimated revenues? How did you arrive at this estimate?

Answer: The Commission expected to have all final rules on the fees rulemakings in place before the start of fiscal year 1984, however, it now appears that these rulemakings will be phased in during FY 1984 and as a result, expected revenues are currently estimated at $56,250,000.

The estimate was made by using projected receipts by fee category for the fiscal year and then multiplying these by the proposed fee for that category.

Review of Power Marketing Administration Rates

Question: In FY 83, the Committee Report directed DOE and FERC to agree to streamline rate reviews for the PMA's. What is the status of this proposal?

Answer: A task force was formed comprised of staff members of this Commission, four power marketing agencies, and the DOE Assistant Secretary for Conservation and Renewable Energy. The task force developed a package consisting of a proposed revision to the Secretary of Energy's Delegation Order, a proposed Memorandum of Understanding between me and the Assistant Secretary, and proposed procedures for the filing, review, and disposition of Federal rate schedules. The material developed, which is now under consideration by the principals involved, would apply to all of DOE's power marketing agencies except Bonneville.

Question: How would the agreement change the current FERC responsibilities and will the review period be reduced?

Answer: Under the proposed agreement, the Commission would place a great deal of reliance on the verification by the Secretary of Energy (or appropriate delegatee) that each rate application complies with the Commission's filing requirements and that the proposed rates conform to the need to encourage the most widespread use of power and energy at the lowest possible rates to consumers consistent with sound business principles and other requirements of law. The Commission would then determine whether the proposed rates are sufficient to recover the costs of producing and transmitting electric energy, including the amortization of the capital investment allocated to power, over a reasonable period of years. We expect that, with this verification by the filing party and with better definition of the Commission's filing requirements, the time required for staff review and Commission action could be significantly reduced.

Question: What is your view on the appropriate scope of the FERC review? Should FERC be concerned with whether proposed rates are excessive as well as the question of whether or not rates are adequate to cover costs?

Answer: The Commission's primary concern would be the protection of the Federal investment. Unlike private utilities, the PMAs propose rates only after going through an extensive governmental hearing process, in which customers have ample procedural opportunities to present oral and written comments. Perhaps understandably, the focus of attention and thrust of the argument in these regional proceedings is on the need to keep rates low. The national interest of recouping the Federal investment tends to get less attention.

Question: What protection would consumers have, outside of costly and time-consuming litigation, to ensure that the PMA rates were not too high if FERC's authority were limited to reviewing whether the rates were high enough?

Answer: In developing their proposed rates, the PMAs go through extensive hearing processes in which customers and other interested parties can present oral and written comments. The proposed agreement developed by our staffs would leave the consumers fully protected by providing them with an opportunity to state their case to the PMA Administrator, to the Assistant Secretary or other higher authority within DOE , or as a last resort, to the Federal courts. Our experience indicates that retaining the Commission as another level of review for customers is redundant and wastes Federal resources.

Question: If FERC's authority were limited to reviewing whether the rates were high enough, what protection would consumers have, outside of litigation, if Congress mandated that power from Federal projects be priced at replacement cost?

Answer: The Commission in exercising its confirmation and approval responsibilities, like the power marketing agencies in exercising their ratemaking responsibilities, is governed by the legislative intent behind the various organic or site specific authorizing acts. If Congress were to mandate new criteria for Federal rates, we would, of course, be bound by the new criteria. The protection provided the consumers throughout the process would not necessarily be affected.

Question: With respect to Bonneville Power Administration rate proposals, last year we discussed 2 pending BPA proposals - one of which was before FERC for over 2 years. What is the status of those filings?

Answer: Although we have made some progress in processing Bonneville rates, the Commission still has on hand power rates filed in December 1979, power and transmission rates filed in June 1981, and power rates filed in August 1982. With respect to the 1979 filing, while we have been hampered by a paucity of data provided by Bonneville, I feel confident that the Commission will be able to resolve the outstanding issues in the near future. With respect to the 1981 and 1982 filings, I anticipate that, in the very near future, the Commission will set appropriate portions for hearing as required by the Pacific Northwest Power Act.

Question: What is being done to reduce the pending workload in Electric Power regulation?

Answer: Partly as a result of our lengthy negotiations with the power marketing agencies last fall, I believe we have arrived at some mutual understandings and general agreements concerning the nature of the material that should be provided in each rate filing. The Commission is developing these filing requirements in a proposed rulemaking. Once we achieve some consistency in the filings and general understandings of each party's role in the process, we should be able to decrease our backlog of filings in the Federal rate program.

Question: Provide the Committee with a list of all pending applications with the time of filing and any action taken on it?

Answer: The list and status of pending Federal rate applications is as follows:

Bonneville Power Administration

Docket EF80-2011, System Power Rates, refiled on July 10, 1981. This filing was initially made in 1979 and remanded by the Commission on November 21, 1980, for further development of the record. By Order issued September 1, 1982, an informal conference was convened to encourage a settlement among the parties. This item is scheduled for consideration at the Commission's meeting of April 27, 1983.

Docket EF81-2011, System Power Rates, filed on July 29, 1981. Jurisdictional and procedural issues under the Pacific Northwest Power Act were set for briefing by Order issued January 19, 1982. Interim rates were extended to January 1, 1983, by Commission Order issued June 22, 1982. By Order issued September 1, 1982, the scope of the Commission's jurisdiction was resolved. This item is scheduled for consideration at the Commission's meeting of April 27, 1983.

Docket EF81-2021, Transmission System Rates, filed on July 29, 1981. This filing has the same case history as Docket No. EF81-2011 except that interim rates were further extended to January 1, 1984, by Commission Order issued February 18, 1983. Again, this item is scheduled for consideration at the Commission's meeting of April 27, 1983.

Docket EF82-2011, System Power Rates, filed on August 16, 1982. By Order issued September 29, 1982, interim rates were made effective on October 1, 1982. This item is scheduled for consideration at the Commission's meeting of April 27, 1983.

Western Area Power Administration

Docket EF82-5031, Power Rates for the Pick-Sloan Missouri Basin Program, filed on July 12, 1982. The staff review in this filing is nearing completion.

Docket EF83-5131, Special Sales Rate Schedule, filed on December 6, 1982. Staff review of this filing is nearing completion.

Docket EF83-5101, Power Rates for the Falcon Project, filed on December 16, 1982. Staff review of this filing is nearing completion.

Docket EF81-5021, Substitute Rates for the Colorado River Storage Project, filed on March 21, 1983. Staff review is underway and the staff's recommendations for Commission action should be completed by early May 1983.

Southeastern Power Administration

Docket EF83-3041, Power Rates for the Kerr-Philpott Projects, filed on March 28, 1983. Staff is reviewing the filing to determine whether it is complete and adequate for staff's detailed review.

Consolidation

Question: Will you be consolidating and relocating your operations in FY 84? What obstacles do you face?

Answer: Given a Congressional appropriation for the move, the Commission could relocate and consolidate during FY 84 but only if GSA would make a suitable building available.

During FY 82, the Commission prepared and submitted to GSA a reasonable prospectus requesting a suitable location. However, on April 9, 1982, GSA rejected our prospectus stating that remaining in our existing building was the most "cost-effective option." This response by GSA totally ignores a critical issue behind our request--the deterioration of staff morale and a jeopardy of health, life and property of the staff and the participating public. In fact, the GSA solution proposed that the Commission consolidate from its four locations into its Union Center Plaza site on North Capitol Street. Moving even more Commission staff into the high crime area of the North Capitol Street site is not only unconscionable, but a physical impossibility.

We have carefully studied the requirements to relocate. Congress in FY 83 identified funds for a move, but GSA remains an unyielding obstacle by refusing to provide us with a suitable building.

Question: How much was requested in FY 1983 for this initiative?

Answer: The Commission's FY 1983 Congressional submission requests $4,700,000 to relocate and centralize Commission operations in one location. The actual total amount required to meet the

Commission's needs is $5,740,000; however, savings will be realized through reduced guard services, transportation, and building operations. These savings should total approximately $1,000,000.

Of the actual total cost, more than 60 percent or $3,500,000 will be needed for increased building rent. The remaining $2,240,000 will be used for moving equipment and furniture and for construction to adapt the facility to meet the Commission's specific needs.

TAPS Case

Question: Explain the importance of FERC continuing to resolve this case?

Answer: In the past, the Commission has argued that to the extent that participation by its staff in this important case leads to lower tariffs for the TAPS owners, that U.S. consumers would receive long-term benefits because a lower tariff would optimize exploration and development in Alaska, which, in turn, would lead to a more secure supply of petroleum reserves, would provide jobs, and would reduce the nation's balance of payments. Today, however, there is an additional economic reason for our staff to continue to participate in the TAPS rate case. In P.L. 96-223, § 101(a)(1), the Congress amended the Internal Revenue Code to provide, after December 31, 1982, that any downward adjustment in the TAPS tariff would increase the U.S. Treasury's collection of Windfall Profit Taxes for Sadlerochit oil. Direct testimony submitted by the Commission staff proposes tariffs that will, if approved, materially reduce the rates for Sadlerochit production and result in substantial payments of Windfall Profit Tax to the U.S. Treasury.

Question: How much has been spent, what has been accomplished to date, and how close to completion?

Answer: Through FY 1982, line staff and its contractors have spent approximately $11.0 million in the 71 months since the initial tariffs were filed. The hearing is approximately 80 percent completed and should be concluded during FY 1984. Hearings have been completed on Phase I methodology, and a massive discovery effort was necessary to enable protestants to prepare Phase II evidence. This discovery was completed at the end of FY 1981. On December 16, 1981, protestants filed their initial evidence on prudent investment issues. Cross-examination of this evidence began in late February 1982 and was not completed until mid-December 1982. Protestants filed their cost of service evidence on March 24, 1983. Respondents are scheduled to file answering evidence on cost of service issues on April 26, 1983, and the cost of service evidence of all parties is scheduled to be cross-examined beginning May 23, 1983, and ending June 17, 1983. In addition, on April 15, 1983, respondents filed their answering evidence on prudent investment issues, and this evidence is scheduled to undergo cross-examination beginning on June 20, 1983, and ending on September 9, 1983. After this session is completed, a Phase I remand hearing is scheduled to begin on January 16, 1984, and after that hearing is completed, a final hearing will be held that will address protestants' rebuttal evidence on prudent investment issues, and we expect this final hearing will be completed prior to the end of FY 1984.

Question: Why is additional funding needed in FY 1983?

Answer: The present contract with our engineering contractor, Tippetts-Abbett-McCarthy-Stratton (TAMS), was funded through April 15, 1983, and was recently extended, at no cost, through April 30, 1983.

This contractor provided Phase II testimony on prudent investment issues and their cross-examination was not completed until mid-December 1982. Since the hearing ended, TAMS has completed an analysis of their cross-examination for the purpose of strengthening soft spots identified in the cross-examination process. They have also completed background checks of respondents' witnesses who we believe will answer their Phase II direct presentation. As mentioned in the preceding answer, respondents' answering evidence on prudent investment issues was filed on April 15, 1983, the same day that TAMS' contract was scheduled to terminate. Additional funding is necessary so that TAMS can analyze evidence answering respondents' contentions and provide suggested lines of cross-examination for staff counsel to pursue in the hearing that is scheduled to begin on June 20, 1983.

TAMS would also provide day-to-day support during this hearing which is scheduled to end on September 9, 1983. Without additional funding, staff will have to abandon its proposed $538 million rate base adjustment, which amounts to 16¢ per barrel and would generate about $63 million in additional Windfall Profit Tax payments to the U.S. Treasury.

Question: How much is requested for FY 1984 and how will this be utilized?

Answer: We are requesting $350,000 in contract funding for FY 1984 so that TAMS may file rebuttal evidence on prudent investment issues. The date for the service of this evidence is presently unscheduled, but we expect it will be required to be filed during the first half of FY 1984 and will undergo cross-examination in the second half of FY 1984.

QUESTIONS SUBMITTED BY SENATOR MCLURE AND SENATOR GARN

Chairman HATFIELD. I have other questions from Senator McClure and Senator Garn for the record as well. So, we will submit these to you.

Thank you, Mr. Chairman, very much and gentlemen, for your testimony today.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR McCLURE

Federal Dam Annual Use Charges

Question: It is my understanding that the Commission is proposing to change the method whereby charges for the creation of power at federally constructed dams are assessed. Is that correct?

Answer: Yes. On March 31, 1983, the Commission issued a Notice of Proposed Rulemaking to amend its regulations governing annual charges for hydroelectric power projects that use Government dams and other structures. The amendments define a standardized procedure for computing the charges, based on estimated project net benefits over the license term. The basic method remains unchanged from that traditionally used by the Commission, known as the sharing-the-net-benefits method. However, the amendments are designed to improve the accuracy of the net benefit estimates, to correct for inflation shrinkage of the dollar and to improve the ability of prospective developers to forecast the annual charges.

Question: Would you please describe to me the stage at which these proposed changes now sit?

Answer: The Notice of Proposed Rulemaking specifies that comments be filed by May 16, 1983, to permit the Commission to issue a final rule at the earliest possible date. In addition to the review of comments received, which are expected to be substantial, certain technical work also must be completed before a final rule can be issued. This includes selection of the regions for which power values are to be developed, the assembly of final cost data for 1982, and establishment of the data format and the sample power values to be published annually in the Federal Register.

Question: Where was the process for making these changes initiated? Was it begun during this or during the preceding Administration?

Answer: During the late 1970's several prospective licensees raised questions concerning the method used to estimate project net benefits. In considering these questions, staff recognized that an in-depth reexamination of the annual charge methodology was appropriate. A 1979 Licensing Order (P-2741) stated that staff was "reassessing comprehensively the subject of suitable annual charges" and that determination of a final charge would be made upon completion of that reassessment. In 1982, the Commission directed staff to select a methodology from among several proposals advanced by various staff elements and to prepare a draft Notice of Proposed Rulemaking.

Question: Is it determined whether the adjustment will result in increases or reductions in the charges now paid on an individual basis? Will it result in net increases or reductions in revenue to the government?

Answer: Projects with previously established annual charges will continue to pay those charges without change until one of the review points permitted by the statute is reached. These are at 20 years after the project is available for service and at periods of not less than 10 years thereafter. Projects with licenses which specify that the annual charge will be determined in accord with this rulemaking, but not to exceed a specified amount, will have charges not in excess of that amount until at least the 20 year point.

Where project power has been valued at the high cost of oil-fired generation, and future inflation proves to be low, the annual payments determined by the former method could represent more than 50 percent of the true net benefits. In more accurately determining the true net benefit, the proposed method may in such cases result in lower payment values and smaller returns to the Government than the former method. However, because of unavoidable errors in estimating inflation and fuel price escalation under the former method, the proposed method will generally increase the real value of returns to the Government, despite lower charges in the early years of project operation.

With the proposed method, the annual charges represent constant real values. Under the former method, the uniform annual charges represent declining real values, in the presence of inflation. Thus, for the same total real return to the government, the proposed method will generally provide lower current dollar payments in the early years and higher current dollar payments in the later years, as compared to the former method.

Because actual inflation and fuel cost escalation over the past decade have far exceeded the estimates used to establish annual charges for older projects, some projects may be paying much less than 50 percent of the annual net benefit. While a correction may be made at the statutory review points to increase future payments to the proper level, the previous underpayments would still result in aggregate license term revenues to the Government of less than 50 percent of the aggregate net benefit.

Question: What is the reason that these changes are deemed to be necessary or desirable?

Answer: The changes in method are desirable first, to standardize the computations and minimize contentions that assumptions have been arbitrarily selected for individual projects; second, to provide developers with the ability to make reasonably accurate estimates of annual charges while projects are in the planning stage; third, to have the annual charges somewhat proportioned to the developer's revenue stream; and fourth, to provide a means of better assuring that the Government recovers its share of the real net benefits made available by its dams and structures.

Question: What effect would these changes have on the rates of electric utility customers?

Answer: The effects of the proposed changes on electric rates depend on who the developer is and on the point in time. Where a project is developed by a non-utility entity and its power is sold to a utility at avoided cost or less, the utility's ratepayers will have the same or lower rates as a result of the utility's purchase.

If a utility develops a project itself, the project benefits reduce the rates for its ratepayers. Should the more accurate determination of net benefits afforded by the proposed method result in greater charges, because the former method failed to capture 50 percent of the net benefit, electric rates would be somewhat higher than with the incorrect charge. However, the rates would still be lower than they would have been without the project. In no case, will the benefits made available by the Government dam or structure result in increased rates to electric ratepayers.

Because the proposed method generally results in lower charges in the early years of project operation, with nominal dollar increases only as a result of general inflation, the rate saving benefits accruing to customers of a utility developer will be an approximately constant percentage of the electric bills over the license term. Under the present method, the rate saving benefits are smaller at the beginning of project operation but increase steadily over the years as a percentage of the bills.

Questions Submitted by Senator Garn

Power Marketing Administration

When you testified before this Subcommittee on April 13, 1983, you were asked with respect to FERC review of Power Marketing Administration (PMA) rates for excessiveness why Western Area Power Administration (WAPA) ratepayers should have a different degree or type of protection compared to the Southeastern, Southwestern, and Alaska Power Administrations. In response you said the following:

First, you said that WAPA is the youngest of the PMAs.

Second, you said the accounting practices at WAPA are different. You also noted that the Grace Commission report reflected the view that the accounting systems of all the PMAs are substandard.

Third, you said that there are better relationships between the FERC staff and the other PMAs, and that communications between the FERC staff and WAPA are difficult. You indicated that some fault lies with the FERC staff, and some with WAPA.

Question: Are you saying that the relative youth of WAPA warrants special treatment for its rates? If so, why? Don't you think that the relative youth of WAPA is a reason for giving its ratepayers better protection against excessive rates?

Answer: Although WAPA was formed and placed in the Department of Energy in 1977, the Secretary of Energy, not the FERC, had full rate approval responsibility until January 7, 1979. It was then that the Secretary of Energy delegated "review and approval" authority to the Commission. Thus, we have been reviewing WAPA rate submittals for only four years. Prior to January 1979, neither WAPA nor its predecessor, the power marketing elements of the Bureau of Reclamation, had experience with having rates reviewed by a regulatory body. Also, neither FERC nor its predecessor, the Federal Power Commission, had much experience in interpreting the somewhat unique body of Reclamation laws. We certainly do not treat WAPA any differently than we treat the other PMA's but we do recognize that the Congressional intent in authorizing various reclamation projects may differ from the Congressional intent behind Corps of Engineers projects.

Question: If WAPA's accounting standards are substandard, doesn't that justify increased protection for its ratepayers who will have to bear the costs of accounting problems? Wouldn't FERC be better equipped than the courts to deal with such accounting problems, given its current awareness of them and experience in dealing with the PMAs? Wouldn't you be providing an incentive for PMAs to improve accounting standards by reviewing their rates for excessiveness? What do you think other PMAs will do about their accounting systems if WAPA is able to avoid FERC review for excessiveness because its accounting system is substandard?

Answer: The Commission's staff has discerned a number of weaknesses in accounting systems used by various PMAs. First, it should be recognized that proper accounting is a necessary basis for assessing whether the proposed repayment in filed rate schedules is adequate. One problem is that it is not always possible to reconcile the books kept by the construction agencies with the books kept by the PMAs. Also, there are difficulties in translating accounting requirements, depreciation rates for example, into repayment requirements, amortization for example. In the case of WAPA, the problem is compounded in that WAPA apparently does not keep track of individual investments, making it impossible for the Commission to determine whether individual investments are being repaid on schedule. I understand that WAPA is starting to improve its bookkeeping in this regard. All PMAs assure us that their books meet the statutory requirements of the Federal Power Act and I understand that the PMAs recently began routine outside audits. In the case of Bonneville, the Commission has directed BPA to institute a separate accounting system to track repayment of its transmission system investment. We have not, as yet, attempted to audit any of the PMAs but we may find it necessary to do so in the future.

Question: In what way and at which personnel levels are communications difficult between FERC and WAPA? How are FERC and WAPA respectively at fault in this regard? Are you saying WAPA ratepayers might be denied treatment similar and equal to those of other PMA ratepayers because FERC cannot communicate properly and has poor relations with the body it is trying to regulate? Do you think the poor relationship is in any way indicative of an attitude of WAPA toward FERC resulting from the Colorado River Storage Project case where FERC disapproved and remanded WAPA's excessive rates? How hard do you think other PMAs will work on good communication and relations with FERC if they see that WAPA is able to avoid FERC review for excessiveness because it does not have a good relationship with FERC?

Answer: During the early phase of the Delegation Order, both the Commission staff and the Commission itself had difficulties in relations with WAPA. WAPA refused to comply with staff requests for information on the computer program that formed the basis for its rate filings and additional information relating to a specific rate filing. In the two major WAPA rate cases in which the Commission issued orders, WAPA requested reconsideration of the Commission's findings and requested a series of time extensions to file substitute rates. Also, WAPA took steps to have the Commission's delegated authority withdrawn. However, I believe our communications have been improving. WAPA participated actively in the staff level discussions leading to drafting of a proposed Memorandum of Understanding and recently our staff has received valuable prefiling briefings on two of WAPA's major rate cases. I know that WAPA took strong exception to the Commission's disapproval of its Colorado River Storage Project rates, but I do not believe that this has had an adverse effect on our professional and organizational relationships.

Question: Both FERC and WAPA are public bodies with public responsibilities. Shouldn't consumers be insulated from substandard accounting practices and poor relationships in and between their public institutions?

Answer: The Commission is aware of its responsibilities to the Federal treasury and to the consumer and we are continually striving to improve our performance in that regard. I think we are making progress, albeit slowly.

U.S. NUCLEAR REGULATORY COMMISSION

STATEMENT OF NUNZIO J. PALLADINO, CHAIRMAN

ACCOMPANIED BY:
VICTOR GILINSKY, COMMISSIONER
JAMES ASSELSTINE, COMMISSIONER
WILLIAM DIRCKS, EXECUTIVE DIRECTOR FOR OPERATIONS

Chairman HATFIELD. Now, I would like to call Dr. Nunzio J. Palladino, Chairman of the U.S. Nuclear Regulatory Commission.

We have your full statement which we will place in the record following your summary statement.

You may proceed to summarize or highlight as you wish. Also you have with you today I believe the Commissioners, Mr. Gilinsky and Mr. James Asselstine. We welcome all of you.

Mr. PALLADINO. Thank you.

SUMMARY OF STATEMENT

Mr. Chairman, it is a pleasure to be back with you today to discuss the NRC's budget request. As you indicated, we have with us today Commissioners Victor Gilinsky and James Asselstine. With us also is the Executive Director for Operations, Mr. William Dircks, and General Counsel, Mr. Herzel Plaine, and the Directors of the principal offices of the Commission.

With your permission I would like to discuss with you now in very general terms our budget request and submit for the record our written statement which provides a more detailed discussion.

In fiscal year 1983, we are operating under a continuing resolution which limits our new budget authority to $462.5 million. Favorable action on a pay raise supplemental of $3.5 million would increase this to $466.0 million, an amount that is $13.5 million less than the President requested and $8.5 million less than was approved in the House and Senate reports on appropriations for fiscal year 1983.

Our appropriations request for fiscal year 1984 is for $466.8 million. In addition, we are again requesting authority for a period of 2 fiscal years from our authorizing committees. Our authorization request for the second year, fiscal year 1985, is for $460 million.

Our requests represent a downward trend in real spending power. For example, in fiscal year 1981 the NRC budget approved by Congress was $452.5 million. Using actual inflation rates to date and conservative projections, it would require over $500 million to fund the same level of work in fiscal year 1984 as we did for $452.5 million in fiscal year 1981.

ACCOMMODATION OF REDUCTIONS

Since 1981 there has been a general belt tightening and to some extent a reallocation of resources within NRC. However, the main impact of this real reduction in resources has been in the NRC research program. For example, administration of the loss of fluid test (LOFT) project has been transferred to the Department of Energy as part of an international consortium. There has also been a restructuring of other parts of our research program.

These actions have helped us to accommodate most of the reductions. Having said this, I must stress that we still have many technical safety issues to resolve. A healthy research program is essential if we are to maintain the adequate technical base needed to make sound regulatory decisions.

Also, contrary to a belief by some, our total workload is not declining. The experience of the past 2 years has convinced me that our workload of licensing new nuclear power plants will tend to stretch out over several years rather than peaking and then dropping precipitously. Further, as new plants gradually come on line, we must shift resources from the licensing process to surveillance of nuclear operations in the field.

PROTECTION OF PUBLIC HEALTH AND SAFETY

From an overall agency viewpoint, it is essential that adequate resources be maintained to assure that we can continue to discharge fully our responsibilities to protect the public health and safety. A concern is that our estimates for both staff and funding in the mid-1980's may be nearing the absolute minimum needed to cover all of the critical tasks of our regulatory mission. To help us get a better forecast of our needs for the future, we have directed the Executive Director for Operations to examine the long-range resource requirements of the agency over the next 10 years. The results of this examination should be available this summer.

I would also point out that the agency is still widely dispersed around the metropolitan Washington area. As emphasized in past testimony, this situation has adversely affected our ability to carry out our responsibilities in an efficient and effective manner. By prolonging this problem, resources are being unnecessarily expended. The Commission is hopeful that the executive branch and the Congress can provide a solution to this problem as soon as possible.

As I stated last year, I see the present and near future as a period of transition for the Nuclear Regulatory Commission. We are making a transition from an extended period of rapid growth to one of relative stability and constrained resources.

With a tight budget, it is especially important that we make every dollar count so that the Commission's highest priorities are met. Stating our priorities clearly and concisely is an important step toward planning to meet them; it is also an important part of making the regulatory process more effective and efficient.

Like last year, we have set forth the principal objectives of the Commission in our policy and planning guidance for 1983. Many of these key objectives are discussed in my written statement for the record.

The Commission's budget request is highlighted in my written statement and detailed in the Commission's budget submission, copies of which have already been provided the subcommittee. For your convenience, the major changes in both dollars and personnel are summarized in two tables attached to this statement and to my written statement.

PREPARED STATEMENT

This completes my summary statement, Mr. Chairman. We would be pleased to answer any questions you may have.

[The statement follows:]

STATEMENT OF NUNZIO J. PALLADINO, CHAIRMAN

INTRODUCTION AND OVERVIEW

MR. CHAIRMAN, IT IS A PLEASURE TO BE BACK WITH YOU TODAY TO DISCUSS THE NRC'S BUDGET REQUEST. WITH ME TODAY ARE COMMISSIONERS VICTOR GILINSKY AND JAMES ASSELSTINE, THE NRC EXECUTIVE DIRECTOR FOR OPERATIONS, MR. WILLIAM DIRCKS, AND THE DIRECTORS OF THE PRINCIPAL OFFICES OF THE COMMISSION.

IN FISCAL YEAR 1983, WE ARE OPERATING UNDER A CONTINUING RESOLUTION WHICH LIMITS OUR NEW BUDGET AUTHORITY TO $462.5 MILLION. FAVORABLE ACTION ON A PAY RAISE SUPPLEMENTAL OF $3.5 MILLION WOULD INCREASE THIS TO $466.0 MILLION, AN AMOUNT THAT IS $13.5 MILLION LESS THAN THE PRESIDENT REQUESTED AND $8.5 MILLION LESS THAN WAS APPROVED IN THE HOUSE AND SENATE REPORTS ON APPROPRIATIONS FOR FY 1983.

OUR APPROPRIATIONS REQUEST FOR FY 1984 IS FOR $466.8 MILLION. IN ADDITION, WE ARE AGAIN REQUESTING AUTHORITY FOR A PERIOD OF TWO FISCAL YEARS FROM OUR AUTHORIZING COMMITTEES. OUR AUTHORIZATION REQUEST FOR THE SECOND YEAR, FY 1985, IS FOR $460.0 MILLION.

OUR REQUEST REPRESENTS A DOWNWARD TREND IN REAL SPENDING POWER. FOR EXAMPLE, IN FY 1981 THE NRC BUDGET APPROVED BY CONGRESS WAS $452.5 MILLION. USING ACTUAL INFLATION RATES TO DATE AND CONSERVATIVE PROJECTIONS, IT WOULD REQUIRE OVER $500.0 MILLION TO FUND THE SAME LEVEL OF WORK IN FY 1984 AS WE DID FOR $452.5 MILLION IN FY 1981.

SINCE 1981 THERE HAS BEEN A GENERAL BELT-TIGHTENING AND TO SOME EXTENT A REALLOCATION OF RESOURCES WITHIN NRC. HOWEVER, THE MAIN IMPACT OF THIS REAL REDUCTION IN RESOURCES HAS BEEN IN THE NRC RESEARCH PROGRAM. FOR EXAMPLE, ADMINISTRATION OF THE LOSS OF

FLUID TEST (LOFT) PROJECT HAS BEEN TRANSFERRED TO THE DEPARTMENT OF ENERGY AS PART OF AN INTERNATIONAL CONSORTIUM. THERE ALSO HAS BEEN A RESTRUCTURING OF OTHER PARTS OF OUR RESEARCH PROGRAM. THESE ACTIONS HAVE HELPED US TO ACCOMMODATE MOST OF THE REDUCTIONS. HAVING SAID THIS, I MUST STRESS THAT WE STILL HAVE MANY TECHNICAL SAFETY ISSUES TO RESOLVE. A HEALTHY RESEARCH PROGRAM IS ESSENTIAL IF WE ARE TO MAINTAIN THE ADEQUATE TECHNICAL BASE NEEDED TO MAKE SOUND REGULATORY DECISIONS.

ALSO, CONTRARY TO A BELIEF BY SOME, OUR TOTAL WORKLOAD IS NOT DECLINING. THE EXPERIENCE OF THE PAST TWO YEARS HAS CONVINCED ME THAT OUR WORKLOAD OF LICENSING NEW NUCLEAR POWER PLANTS WILL TEND TO STRETCH OUT OVER SEVERAL YEARS RATHER THAN PEAKING AND THEN DROPPING PRECIPITOUSLY. FURTHER, AS NEW PLANTS GRADUALLY COME ON LINE, WE MUST SHIFT RESOURCES FROM THE LICENSING PROCESS TO SURVEILLANCE OF NUCLEAR OPERATIONS IN THE FIELD.

FROM AN OVERALL AGENCY VIEWPOINT, IT IS ESSENTIAL THAT ADEQUATE RESOURCES BE MAINTAINED TO ASSURE THAT WE CAN CONTINUE TO DISCHARGE FULLY OUR RESPONSIBILITIES TO PROTECT THE PUBLIC HEALTH AND SAFETY. A CONCERN IS THAT OUR ESTIMATES FOR BOTH STAFF AND FUNDING IN THE MID-1980'S MAY BE NEARING THE ABSOLUTE MINIMUM NEEDED TO COVER ALL OF THE CRITICAL TASKS OF OUR REGULATORY MISSION. TO HELP US GET A BETTER FORECAST OF OUR NEEDS FOR THE FUTURE, WE HAVE DIRECTED THE EXECUTIVE DIRECTOR FOR OPERATIONS TO EXAMINE THE LONG-RANGE RESOURCE REQUIREMENTS OF THE AGENCY OVER THE NEXT TEN YEARS. THE RESULTS OF THIS EXAMINATION SHOULD BE AVAILABLE THIS SUMMER.

WITH A TIGHT BUDGET, IT IS ESPECIALLY IMPORTANT THAT WE MAKE EVERY DOLLAR COUNT SO THAT THE COMMISSION'S HIGHEST PRIORITIES ARE MET. STATING OUR PRIORITIES CLEARLY AND CONCISELY IS AN IMPORTANT STEP TOWARDS PLANNING TO MEET THEM; IT IS ALSO AN IMPORTANT PART OF MAKING THE REGULATORY PROCESS MORE EFFECTIVE AND

EFFICIENT. LIKE LAST YEAR, WE HAVE SET FORTH THE PRINCIPAL OBJECTIVES OF THE COMMISSION IN OUR POLICY AND PLANNING GUIDANCE FOR 1983.

I WILL DISCUSS MANY OF THE KEY OBJECTIVES OF THE COMMISSION WITH YOU DURING THE NEXT PORTION OF MY PRESENTATION. I WILL THEN RELATE SOME OF THE HIGHLIGHTS OF NRC'S FY 1984 BUDGET REQUEST THAT WILL ENABLE US TO CARRY OUT THESE OBJECTIVES.

KEY OBJECTIVES

FIRST AND FOREMOST AMONG OUR OBJECTIVES IS TO ASSURE THAT ALL OPERATING FACILITIES MAINTAIN ADEQUATE LEVELS OF PROTECTION OF PUBLIC HEALTH AND SAFETY.

IT HAS BEEN ALMOST FOUR YEARS SINCE THE ACCIDENT AT THREE MILE ISLAND. FOLLOWING THE ACCIDENT, THE COMMISSION TOOK IMMEDIATE STEPS TO UNDERSTAND THE LESSONS TO BE LEARNED FROM IT. MANY OF THE MOST IMPORTANT LESSONS LEARNED FROM TMI HAVE ALREADY BEEN APPLIED TO PLANTS IN OPERATION OR UNDER CONSTRUCTION. THE RESULT HAS BEEN TO UPGRADE REACTOR SAFETY SIGNIFICANTLY.

SOME IMPORTANT WORK STILL NEEDS TO BE DONE. THREE MILE ISLAND TAUGHT US NOT TO IGNORE THE ROLE OF HUMANS IN PLANT OPERATION. ACCORDINGLY, WE HAVE GIVEN GREATER EMPHASIS TO HUMAN FACTORS IN THE SAFETY OF NUCLEAR PLANTS. IN THIS REGARD, WE EXPECT TO COMPLETE WORK ON FORMULATING OUR LONG-RANGE HUMAN FACTORS PROGRAM AND TO IMPLEMENT THAT PROGRAM DURING FISCAL YEARS 1983-85.

THREE MILE ISLAND ALSO TAUGHT US THE IMPORTANCE OF CLOSE STUDY OF OPERATING EXPERIENCE THAT MAY CONTAIN POSSIBLE PRECURSORS TO ACCIDENTS. AS A RESULT, WE GREATLY EXPANDED NRC EFFORTS TO COLLECT, ANALYZE, AND DISSEMINATE SIGNIFICANT OPERATIONAL DATA ON

A TIMELY BASIS. CLOSE AND CONTINUOUS ATTENTION TO THE SAFETY IMPLICATIONS OF ACTUAL PLANT OPERATING EXPERIENCE REMAINS A VITAL PART OF OUR JOB.

INSPECTION AND ENFORCEMENT ACTIVITIES ARE ANOTHER MEANS AT OUR DISPOSAL TO ASSURE THAT OPERATING FACILITIES MAINTAIN ADEQUATE LEVELS OF SAFETY. OUR ENFORCEMENT PROGRAM WILL CONTINUE TO BE FOCUSED ON ACHIEVING COMPLIANCE WITH NRC REQUIREMENTS. WE INTEND TO BE PROMPT AND VIGOROUS IN ENFORCING OUR REQUIREMENTS, AND TO EVALUATE PERIODICALLY THE RESULTS OF OUR ENFORCEMENT EFFORTS IN ORDER TO MAKE THEM MORE EFFECTIVE.

THERE ARE 76 NUCLEAR PLANTS CURRENTLY LICENSED TO OPERATE IN THE UNITED STATES, GENERATING ABOUT ONE-EIGHTH OF THE NATION'S ELECTRICITY -- ABOUT AS MUCH AS ALL THE ELECTRICITY THE U.S. WAS USING AT THE CLOSE OF WORLD WAR II. ABOUT 60 ADDITIONAL NUCLEAR UNITS ARE IN VARIOUS STAGES OF CONSTRUCTION -- TWO-THIRDS OF THEM 50% OR MORE COMPLETED. AS CONSTRUCTION OF THE NEW PLANTS CONTINUES, THERE SHOULD BE A SUBSTANTIAL INCREASE IN OPERATIONAL NUCLEAR PLANTS IN THIS COUNTRY OVER THE NEXT SEVERAL YEARS.

NEVERTHELESS, BASED ON PRIOR EXPERIENCE IT IS FAIR TO ASSUME THAT SOME OF THE CONSTRUCTION SCHEDULES NOW REPORTED TO US WILL NOT BE MET. AS A RESULT, THE TOTAL NUMBER OF NEW PLANTS BROUGHT ON LINE WILL PROBABLY BE SPREAD OVER MORE YEARS, THEREBY EXTENDING OUR LICENSING WORKLOAD BEYOND THE POINT WHERE CURRENT PROJECTIONS INDICATE IT WILL TAPER OFF. OUR BUDGET ESTIMATES FOR THE MID-1980'S THEREFORE SHOULD BE EVALUATED IN LIGHT OF THE UNCERTAINTY IN THE CONSTRUCTION SCHEDULES. WE MUST NOT GET INTO A SITUATION WHERE WE CUT BACK TOO SEVERELY ON OUR SKILLED LICENSING STAFF IN ANTICIPATION OF A PRECIPITOUSLY DECLINING WORKLOAD, ONLY TO FIND THAT THE WORKLOAD IS DECLINING MUCH MORE GRADUALLY.

WE DO INTEND THAT THE REGULATORY PROCESSES INVOLVED IN LICENSING THESE NEW PLANTS BE AS EFFICIENT AND EFFECTIVE AS POSSIBLE. WE WANT TO ELIMINATE ALL UNWARRANTED DELAY IN REACHING REGULATORY DECISIONS, AND WE WANT OUR LICENSING BOARDS TO REACH SOUND AND FAIR DECISIONS WHILE AT THE SAME TIME TAKING FIRM HOLD OF THE HEARINGS TO ASSURE THAT THEY ARE CONDUCTED EFFICIENTLY. WE ALSO WILL CONTINUE TO WORK WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) TO RESOLVE DIFFICULTIES IN SECURING THE FINDINGS FOR OFFSITE EMERGENCY PLANS FOR NUCLEAR PLANT SITES IN A TIMELY FASHION.

ONE OF THE PROBLEMS ASSOCIATED WITH BUILDING AND LICENSING THE NEW NUCLEAR PLANTS IS ASSURING ADEQUATE QUALITY. AN EFFECTIVE QUALITY ASSURANCE (QA) PROGRAM IS INDISPENSABLE TO OBTAINING A WELL BUILT AND SAFELY OPERATED NUCLEAR POWER PLANT. CONSIDERING THE VERY HIGH COST OF MISTAKES, EFFECTIVE QA PROGRAMS OUGHT TO BE TOP PRIORITY FOR THE NUCLEAR INDUSTRY FOR ECONOMIC REASONS AS WELL.

UPON BECOMING CHAIRMAN OF THE NRC SOME TWENTY-ONE MONTHS AGO, I WAS STRUCK BY THE DISPARITY IN QUALITY ASSURANCE EFFECTIVENESS AMONG THE UTILITIES CONSTRUCTING NUCLEAR POWER PLANTS. SOME WERE DOING A SUPERIOR JOB, BUT OTHERS WERE NOT DOING TOO WELL. SOME UTILITIES ARE NOW PAYING A HIGH PRICE FOR THEIR PAST INATTENTIVENESS.

IN NUCLEAR POWER PLANT CONSTRUCTION, IT IS OUR JOB TO DETECT MANAGEMENT CONTROL LAPSES AND TO DETECT SUBSEQUENT INEFFECTIVENESS IN THE MANAGEMENT'S QA PROGRAM. WE HAVE NOT ALWAYS DONE THAT JOB AS WELL AS IT MIGHT HAVE BEEN DONE. IN PART, I BELIEVE THIS IS BECAUSE WE HAVE NOT ADDRESSED DESIGN QUALITY AS SPECIFICALLY AND EXTENSIVELY AS SOME OTHER AREAS. IN PART, IT IS ALSO BECAUSE OUR LICENSING AND INSPECTION PROGRAMS HISTORICALLY HAVE FOCUSED ON

INDIVIDUAL PROBLEM AREAS RATHER THAN ON THE BROADER PROJECT MANAGEMENT PICTURE AND HAVE NOT GIVEN SUFFICIENT ATTENTION TO PROJECT MANAGEMENT CONTROL AT CONSTRUCTION SITES.

A NUMBER OF INITIATIVES PUT FORWARD BY THE NRC STAFF HAVE BEEN ADOPTED IN AN EFFORT TO RAISE OUR LEVEL OF CONFIDENCE IN THE QUALITY OF DESIGN AND CONSTRUCTION AND IN MANAGEMENT CONTROL OF THAT QUALITY. THESE INITIATIVES INCLUDE SELF-EVALUATION OF CONSTRUCTION BY THE UTILITY AND THE REQUIREMENT THAT THE UTILITY'S CHIEF EXECUTIVE OFFICER OR HIS DESIGNEE NOW CERTIFY THAT THE FACILITY HAS BEEN DESIGNED, CONSTRUCTED, AND TESTED IN ACCORDANCE WITH LICENSE COMMITMENTS. WE ALSO ARE HOPEFUL THAT THE INSTITUTE FOR NUCLEAR POWER OPERATIONS WILL DEVELOP MORE EFFECTIVE INDUSTRY PROGRAMS TO IMPROVE QUALITY ASSURANCE.

THE NRC IS CONDUCTING A MORE DETAILED AND RIGOROUS EVALUATION OF EACH CANDIDATE FACILITY FOR AN OPERATING LICENSE AND OF ITS INSPECTION AND ENFORCEMENT HISTORY. WE ARE ALSO PLACING GREATER EMPHASIS ON INSPECTIONS OF THE QA PROGRAM AND FIELD QUALITY CONTROL IN THE EARLY STAGES OF CONSTRUCTION THROUGH USE OF A CONSTRUCTION ASSESSMENT TEAM OF INSPECTORS.

IN ADDITION, IN KEEPING WITH THE DIRECTION OF CONGRESS PROVIDED IN SECTION 13 OF PUBLIC LAW 97-415, THE COMMISSION IS CONDUCTING A STUDY OF EXISTING AND ALTERNATIVE PROGRAMS FOR IMPROVING QUALITY ASSURANCE AND QUALITY CONTROL IN THE CONSTRUCTION OF NUCLEAR POWER PLANTS. THIS STUDY WILL ASSESS AGENCY, INDUSTRY AND OUTSIDE PROGRAMS IN QUALITY AND PROJECT MANAGEMENT AND WILL ENHANCE THE LONG-TERM DIRECTION OF NRC QUALITY ASSURANCE POLICIES AND PROGRAMS. WE WILL BE SEEKING PUBLIC COMMENT ON THE VARIOUS APPROACHES UNDER STUDY AND WILL PROVIDE THE CONGRESS WITH A REPORT ON OUR FINDINGS IN 1984.

ONE UNINTENDED AFTER-EFFECT OF THE RUSH TO UPGRADE PLANT SAFETY THAT FOLLOWED THREE MILE ISLAND WAS REVEALED IN A SURVEY TAKEN BY OUR ATLANTA REGIONAL ADMINISTRATOR JAMES O'REILLY JUST BEFORE MY ARRIVAL AT THE NRC. THAT SURVEY ELICITED THE CANDID OPINION OF VARIOUS UTILITY PERSONNEL AND REFLECTED A PERVASIVE CONCERN THAT UTILITIES WERE OVERWHELMED BY THE VOLUME OF REQUIREMENTS BEING ISSUED.

OUR RESPONSE WAS TO SET UP A COMMITTEE OF SENIOR TECHNICAL EXPERTS TO SERVE AS A FILTER FOR PROPOSED NEW REQUIREMENTS AFFECTING MULTIPLE PLANTS. THIS COMMITTEE REVIEWS REQUIREMENTS AND DETERMINES WHETHER EACH ONE WOULD CONTRIBUTE SIGNIFICANTLY TO PUBLIC SAFETY AND WOULD LEAD TO OPTIMAL USE OF BOTH NRC AND LICENSEE RESOURCES. THE COMMITTEE WEIGHS BOTH SAFETY AND COST CONSIDERATIONS AND MAKES ITS RECOMMENDATIONS TO OUR EXECUTIVE DIRECTOR FOR OPERATIONS, WHO IS NOW THE CONTROL POINT FOR ISSUING NEW REQUIREMENTS.

I BELIEVE THAT THIS NEW APPROACH IS WORKING WELL. WE HAVE PUT CONTROLS ON MANY OF THE REGULATORY CHANNELS AND INSTILLED THE DISCIPLINE THAT OUR REQUIREMENTS ARE TO CONTRIBUTE POSITIVELY TO SAFETY, NOT ONLY INDIVIDUALLY, BUT WHEN THEY ARE TAKEN AS A WHOLE. I WANT TO EMPHASIZE THAT THE COMMITTEE'S CHARTER DIRECTS THAT IT NOT REDUCE THE LEVEL OF SAFETY AT NUCLEAR POWER PLANTS. THUS, THE COMMITTEE IS NOT INTENDED TO BLOCK OR DELAY NEEDED NEW REQUIREMENTS.

THE COMMISSION BELIEVES THAT, FOR THE FUTURE, STRONG MEASURES MUST CONTINUE TO BE TAKEN TO CONTROL THE ISSUANCE OF NEW REQUIREMENTS. UNNECESSARY REGULATORY BURDENS ARE TO BE AVOIDED, AND IMPLEMENTATION SCHEDULES ARE TO BE CUSTOMIZED FOR EACH LICENSEE, TAKING INTO ACCOUNT THE COMPETING PRIORITIES OF ALL THE WORK THAT NEEDS TO BE DONE. WE ALSO HAVE ASKED THE EXECUTIVE DIRECTOR TO PROPOSE IN 1983 A MECHANISM TO CONTROL THE ISSUANCE OF SPECIFIC

NEW REQUIREMENTS THAT WOULD AFFECT ONLY INDIVIDUAL PLANTS. THIS APPROACH WOULD LEAD TO MORE THOROUGH EVALUATION OF CASE-BY-CASE PROPOSALS TO ADD REQUIREMENTS. AT THE SAME TIME, WE REMAIN FIRMLY COMMITTED TO MOVE FORWARD EXPEDITIOUSLY WITH NEW REQUIREMENTS THAT ARE NEEDED TO PROTECT THE PUBLIC HEALTH AND SAFETY.

WE ARE VERY INTERESTED IN PROMPT RESOLUTION OF IMPORTANT TECHNICAL MATTERS THAT ARE CLASSED AS UNRESOLVED SAFETY ISSUES. STEAM GENERATOR DIFFICULTIES OF VARIOUS TYPES AND THE PHENOMENON CALLED PRESSURIZED THERMAL SHOCK HAVE BEEN IN THE NEWS OVER THE PAST YEAR. THESE ARE EXAMPLES OF UNRESOLVED SAFETY ISSUES THAT WE HAVE TO KEEP UNDER SCRUTINY AND EVALUATION WHILE WE WORK TOWARD A TECHNICAL RESOLUTION. THEY ARE ALSO EXAMPLES OF PROBLEMS THAT, IF ADDRESSSED THOROUGHLY AND PROMPTLY, NEED NOT POSE A SERIOUS HEALTH AND SAFETY THREAT TO THE PUBLIC. PRIORITIES FOR IMPLEMENTING SOLUTIONS TO THE UNRESOLVED SAFETY ISSUES, ONCE THE SOLUTIONS ARE DEVELOPED, ARE TO BE ESTABLISHED IN LIGHT OF THE SAFETY SIGNIFICANCE OF THE ISSUES AND ALL OTHER REQUIREMENTS IMPOSED ON LICENSEES.

ANOTHER SIGNIFICANT OCCURRENCE HAS BEEN THE REDUCTION IN THE BACKLOG OF THOUSANDS OF OPERATING REACTOR LICENSING ACTIONS. THIS REDUCTION RESULTED FROM OUR CONTROL OF NEW REQUIREMENTS WHILE APPLYING RESOURCES TO THE EXISTING INVENTORY. DURING FY 1982, THE BACKLOG WAS REDUCED FROM ABOUT 5,400 PENDING LICENSING ACTIONS TO APPROXIMATELY 3,600. BY THE END OF FY 1983, WE EXPECT TO HAVE ASSIGNED ABOUT 800 LICENSING ACTIONS TO OUR REGIONAL PERSONNEL, WHO CAN DEVELOP TECHNICAL RESOLUTIONS FROM A VANTAGE POINT MUCH CLOSER TO THE ACTUAL OPERATIONS OF NEARBY LICENSEES. THIS SHIFT OF SOME LICENSING RESPONSIBILITIES TO THE FIVE NRC REGIONAL OFFICES IS PART OF A MANAGEMENT INITIATIVE TO DECENTRALIZE THE IMPLEMENTATION OF SEVERAL NRC NATIONAL PROGRAMS, INCLUDING INSPECTION AND ENFORCEMENT; MATERIALS, SAFEGUARDS AND URANIUM RECOVERY LICENSING; REACTOR OPERATOR LICENSING; OPERATING POWER

REACTOR LICENSE AMENDMENTS AND EMERGENCY PLAN REVISIONS; AND CERTAIN ADMINISTRATIVE AND SUPPORT FUNCTIONS. BY ENLARGING THE ROLE OF NRC REGIONAL OFFICES, THE COMMISSION HOPES TO

- BRING NRC NEARER TO STATE AND LOCAL GOVERNMENTS AND THE PUBLIC BY FORMALIZING THE ROLE OF REGIONAL OFFICES TO REPRESENT NRC IN THEIR REGIONS;

- IMPROVE COORDINATION OF LICENSING WITH INSPECTION AND ENFORCEMENT ACTIVITIES ALREADY IN THE FIELD; AND

- STRENGTHEN INCIDENT RESPONSE CAPABILITY BY DELEGATING CERTAIN RESPONSIBILITIES AND AUTHORITIES TO THE REGIONS.

AT THE IMPLEMENTATION LEVEL, THE REGIONAL OFFICES WILL ACT AS AGENTS OF THE HEADQUARTERS PROGRAM OFFICES, WHICH RETAIN RESPONSIBILITY FOR POLICY GUIDANCE, DIRECTION AND OVERSIGHT OF THEIR NATIONAL PROGRAMS. IN ADDITION TO OVERALL PROGRAM MANAGEMENT, THE HEADQUARTERS OFFICES WILL MAINTAIN THE CENTERS OF EXCELLENCE IN THE HIGHLY TECHNICAL DISCIPLINES THAT ARE NECESSARY TO EVALUATE AND RESOLVE NUCLEAR SAFETY ISSUES, TO REVIEW NUCLEAR POWER PLANT APPLICATIONS AND ISSUE CONSTRUCTION PERMITS AND OPERATING LICENSES, AND TO SUPPORT NUCLEAR REGULATION IN MANY OTHER AREAS.

WE ARE PROCEEDING CAUTIOUSLY. WE WANT TO OBTAIN COMMENTS FROM THE PUBLIC, THE INDUSTRY AND OTHER GOVERNMENT AGENCIES TO ASSURE THAT OUR APPROACH YIELDS ADVANTAGES. THE GRADUAL EXPANSION OF REGIONAL OPERATIONS WILL ENABLE NRC TO LEARN FROM CONTINUING EXPERIENCE IN ADMINISTERING DECENTRALIZED PROGRAMS AND TO BE SENSITIVE TO THE HUMANITARIAN NEEDS OF ITS EMPLOYEES WHOSE FUNCTIONS WILL BE TRANSFERRED AS WELL.

LET ME NOW TURN TO THE PROPOSED LEGISLATION THAT THE COMMISSION SUBMITTED TO THE CONGRESS IN FEBRUARY. THIS LEGISLATION, KNOWN

AS THE "NUCLEAR POWER PLANT LICENSING REFORM ACT OF 1983", WAS INTRODUCED BY SENATOR SIMPSON (S. 893) ON MARCH 23, 1983. IT ADDRESSES STEPS THAT WE BELIEVE ARE NEEDED TO IMPROVE THE LICENSING PROCESS. IN ADDITION TO THESE LEGISLATIVE CHANGES, WE ARE CONSIDERING PROPOSALS FOR CHANGES THAT COULD RESULT FROM ADMINISTRATIVE ACTION WITHIN THE NRC ITSELF.

THE LEGISLATIVE CHANGES SEEK AUTHORITY FROM CONGRESS TO OFFER UTILITIES A CHOICE AMONG PREAPPROVED STANDARD REACTOR DESIGNS, TO PERMIT EARLY APPROVAL OF PLANT SITING, AND TO PERMIT GRANTING OF A COMBINED CONSTRUCTION PERMIT AND OPERATING LICENSE FOR WELL DEVELOPED DESIGNS SO AS TO DEAL WITH AS MANY ISSUES AS POSSIBLE EARLY DURING THE LICENSING PROCESS. THE NEW AUTHORITY SHOULD MAKE THE LICENSING PROCESS FOR NUCLEAR POWER PLANTS MORE COMPATIBLE WITH THE PRESENT STATE OF NUCLEAR TECHNOLOGY WITH NO COMPROMISE OF SAFETY.

THE KEY IS STANDARDIZATION OF PLANTS. IN ADDITION TO REDUCING CONSTRUCTION TIMES AND COSTS, STANDARDIZATION SHOULD ENHANCE SAFETY. IT WOULD ALLOW NUCLEAR DESIGN, ENGINEERING, AND VENDOR RESOURCES, AS WELL AS NRC RESOURCES, TO BE CONCENTRATED ON PARTICULAR APPROACHES AND FEWER DESIGNS. IT WOULD STIMULATE STANDARD PROGRAMS OF CONSTRUCTION PRACTICE AND QUALITY ASSURANCE WHICH CAN BE IMPROVED WITH REPEATED USE. IT SHOULD MAKE FOR BETTER, FASTER TRAINING OF PERSONNEL. EXPERIENCE GAINED AT ANY STANDARD PLANT WOULD BE RELEVANT TO THE OPERATING PERSONNEL, EQUIPMENT, AND PROCEDURES OF LIKE STANDARD NUCLEAR POWER PLANTS WHEREVER THEY ARE LOCATED. THAT SHOULD LEAD TO MORE EFFECTIVE MAINTENANCE OF KEY SAFETY COMPONENTS AND IMPROVED OPERATIONS. FINALLY, STANDARDIZATION SHOULD LEAD TO A MORE EFFECTIVE AND MORE EFFICIENT REGULATORY PROCESS.

INTERNAL REGULATORY CHANGES BEING CONSIDERED INCLUDE FURTHER REVISION OF THE PROCEDURES FOR CONTROLLING NEW REQUIREMENTS, AS I

DESCRIBED A FEW MINUTES AGO, REDEFINITION OF THE ROLE OF THE NRC STAFF IN HEARINGS, AND REVISIONS IN RULES FOR INTERACTIONS BETWEEN THE STAFF AND THE COMMISSION.

WE ARE TAKING A NUMBER OF OTHER STEPS TO SHARPEN THE FOCUS OF OUR REGULATORY PROGRAM. ON MARCH 14, 1983, THE COMMISSION PUBLISHED A POLICY STATEMENT CONTAINING PRELIMINARY SAFETY GOALS FOR NUCLEAR POWER PLANTS. THESE SAFETY GOALS WILL UNDERGO A DETAILED EVALUATION DURING A TWO-YEAR PERIOD. THE GOALS ARE PRELIMINARY IN THAT THEY WILL NOT BE USED AS A BASIS FOR REGULATORY DECISIONS DURING THE TWO-YEAR PERIOD AND ARE SUBJECT TO CHANGE AT THE END.

OUR SAFETY GOALS ARE AIMED AT PROTECTING INDIVIDUALS AND SOCIETY FROM ANY SIGNIFICANT ADDED RISKS DUE TO THE OPERATION OF NUCLEAR POWER PLANTS. OUR POLICY STATEMENT ALSO CONTAINS PRELIMINARY DESIGN OBJECTIVES THAT ARE INTENDED TO BE CONSISTENT WITH THESE GOALS.

IN DEVELOPING THE OBJECTIVES, THE COMMISSION CHOSE RISK LEVELS WHICH WE BELIEVE THE INDUSTRY SHOULD STRIVE FOR RATHER THAN LEVELS THAT ALL PLANTS COULD NOW MEET. OF COURSE THIS DOES NOT MEAN THAT PLANTS WHICH MAY NOT MEET THESE PRELIMINARY OBJECTIVES ARE UNSAFE. WE BELIEVE THAT THE REQUIREMENTS CONTAINED IN OUR CURRENT REGULATIONS ARE ADEQUATE TO PROTECT THE PUBLIC HEALTH AND SAFETY.

WHAT WE ARE DOING IS DEVELOPING NEW TOOLS THAT COULD OFFER, OVER THE LONG HAUL, BETTER INSIGHTS INTO THE QUESTION, "HOW SAFE IS SAFE ENOUGH?" IT IS A DIFFICULT AND BOLD NEW VENTURE FOR THE COMMISSION, BUT ONE WHICH A MAJORITY OF US BELIEVE IS WORTH UNDERTAKING. IF IT IS POSSIBLE TO PREDICT IN ADVANCE JUST HOW FAR IT IS NECESSARY TO GO TO ACHIEVE AN ACCEPTABLE LEVEL OF SAFETY, THAT KNOWLEDGE MAY HELP TO STABILIZE BOTH THE REGULATORY

PROCESS AND LONG-RANGE PLANNING BY UTILITIES AND OTHER ELEMENTS OF THE NUCLEAR INDUSTRY.

DURING THE EVALUATION PERIOD FOR THE SAFETY GOALS, SPECIAL ATTENTION WILL BE GIVEN TO THE USE OF PROBABILISTIC RISK ASSESSMENT (PRA) TECHNIQUES. A GREAT DEAL OF PROGRESS HAS BEEN MADE IN THE USE OF PRA SINCE THE ORIGINAL REACTOR SAFETY STUDY (WASH-1400) APPLIED THE TECHNIQUE IN THE 1970'S. MUCH STILL NEEDS TO BE REFINED. NEVERTHELESS, THE COMMISSION BELIEVES THAT, DESPITE THE LIMITATIONS AND UNCERTAINTIES ASSOCIATED WITH ITS USE, PRA CAN BE A USEFUL TOOL FOR WEIGHING RISKS IN A VARIETY OF REGULATORY APPLICATIONS. THESE INCLUDE DEALING WITH GENERIC SAFETY ISSUES, FORMULATING NEW REGULATORY REQUIREMENTS, ASSESSING AND REVALIDATING OR ELIMINATING EXISTING REGULATORY REQUIREMENTS, EVALUATING NEW DESIGNS, AND SETTING REACTOR SAFETY RESEARCH AND INSPECTION PRIORITIES.

THE NRC STAFF HAS ALSO BEGUN A COMPREHENSIVE REASSESSMENT OF THE RADIOACTIVE SOURCE-TERM. THE SOURCE-TERM IDENTIFIES THE QUANTITIES AND KINDS OF RADIOACTIVE MATERIALS THAT COULD BE RELEASED FOLLOWING A NUCLEAR ACCIDENT. ANALYSIS OF THE ATMOSPHERE INSIDE THE THREE MILE ISLAND CONTAINMENT AND CERTAIN EXPERIMENTS HAVE PROVIDED EVIDENCE THAT THE RADIOACTIVE MATERIALS IN QUESTION MIGHT NOT BE DISPERSED IN THE MANNER AND IN THE AMOUNTS PREVIOUSLY ASSUMED. IN FACT, PREVIOUS ASSUMPTIONS MAY HAVE CONSIDERABLY OVERESTIMATED THE AMOUNT OF RADIOACTIVITY THAT WOULD BE RELEASED IN MOST ACCIDENTS. IF THIS PROVES TO BE THE CASE IT WOULD REDUCE THE CURRENT ESTIMATE OF PUBLIC SAFETY IMPACT ASSOCIATED WITH A NUCLEAR ACCIDENT. BUT THESE POSSIBILITIES REMAIN TO BE CONFIRMED. A REEVALUATION OF THE SOURCE-TERM AND THE IMPACT ON OUR REQUIREMENTS SHOULD BE CONCLUDED WITHIN THE NEXT ONE TO TWO YEARS.

The previous discussion leads me back to an observation made in my opening remarks: behind our regulatory decisions must be a healthy program of research. The research program provides the technical basis for rulemaking and supports licensing and inspection activities. It also enables us to assess the feasibility and effectiveness of safety improvements and to increase our understanding of phenomena and techniques for analyzing them.

Our budget contemplates a balanced research program. The highest priority will be given to light water reactor safety, but an adequate research base will be maintained for advanced reactors and for waste management activities. Particular attention will be given both to research which shows that we ought to change our regulations and to incorporating the results of research into regulations. The staff will also begin to report annually to the Commission on the correlation between research activities and particular regulations. The report will list regulations likely to be substantively modified or substantiated by the research programs and will specify target dates for review of these regulations.

The 97th Congress, in its closing days, passed the Nuclear Waste Policy Act of 1982, which the President has signed into law. The Government now can move forward with the repository development program. We are prepared to do our part to assure that our regulatory responsibilities for the nuclear waste program are carried out properly and promptly in accordance with the direction of the Congress.

We expect to publish the final rule establishing the technical criteria for high level waste repositories early this year. This rule will be consistent with the proposed Environmental Protection Agency standards, but may, of course, be subject to some

REVISION IF THERE ARE CHANGES IN THESE STANDARDS WHEN THEY ARE ISSUED IN FINAL FORM.

OVER THE NEXT SEVERAL YEARS, OUR HIGH-LEVEL WASTE MANAGEMENT PROGRAM WILL FOCUS ON IMPLEMENTING THE REQUIREMENTS OF THE NEW ACT. WE WILL REVIEW DOE'S FIRST SITE CHARACTERIZATION REPORT AND MAKE NECESSARY PREPARATIONS TO REVIEW DOE'S FIRST REPOSITORY LICENSE APPLICATION WITHIN THE TIME-FRAME PRESCRIBED BY THE ACT. WE ALSO EXPECT TO BE READY TO REVIEW PROPOSALS FOR AWAY-FROM-REACTOR OR AT-REACTOR INDEPENDENT SPENT FUEL STORAGE FACILITIES.

I WANT TO ADD THAT WE ARE FINDING THE NEW WASTE POLICY ACT TO BE VERY COMPLEX, REQUIRING A NUMBER OF ACTIONS AND COMMITMENTS TO TAKE PLACE ON A FAIRLY RAPID SCHEDULE. WE ARE NOW EVALUATING THE ACT'S RESOURCE AND PROGRAMMATIC IMPACTS. IN PARTICULAR, BEFORE WE CAN LICENSE ANY NEW NUCLEAR POWER PLANTS, THE UTILITIES BUILDING THESE PLANTS MUST AT LEAST HAVE MADE A GOOD FAITH EFFORT IN NEGOTIATING WASTE MANAGEMENT SERVICE CONTRACTS WITH THE DEPARTMENT OF ENERGY.

IN RELATED MATTERS, WE HAVE RECENTLY PUBLISHED THE FINAL REGULATION GOVERNING THE NEAR SURFACE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE. WE HOPE THAT REGULATION, WHICH PROVIDES ADEQUATE PROTECTIVE REQUIREMENTS, WILL ENCOURAGE THE DEVELOPMENT OF ADDITIONAL LOW-LEVEL WASTE DISPOSAL SITES WITHIN THE U.S.

WE ARE ALSO IN THE PROCESS OF CONCLUDING DELIBERATIONS REQUIRED BY THE COURTS CONCERNING OUR CONFIDENCE IN AMERICA'S ABILITY TO SAFELY DISPOSE OF NUCLEAR WASTE. AND, DURING 1984, WE SHOULD BE ABLE TO PUBLISH A FINAL RULE ESTABLISHING HOW LICENSEES WILL ADDRESS ISSUES OF EXTENDED FUEL STORAGE FOLLOWING THE EXPIRATION OF THEIR LICENSES.

ALMOST FOUR YEARS AFTER THE THREE MILE ISLAND ACCIDENT, THE RADIOACTIVE RUBBLE INSIDE THE DAMAGED UNIT 2 REACTOR REMAINS A POTENTIAL SAFETY AND HEALTH HAZARD TO THE PUBLIC. SAFE AND EXPEDITIOUS CLEANUP IS ONE OF NRC'S HIGHEST PRIORITIES. DIRECT RESPONSIBILITY, OF COURSE, RESTS WITH THE LICENSEE. HOWEVER, WE WILL CONTINUE TO PROVIDE REGULATORY OVERSIGHT AND, IF NECESSARY, TAKE ACTION TO ENSURE PROMPT DECONTAMINATION OF THE FACILITY, INCLUDING SAFE AND TIMELY REMOVAL OF THE REACTOR CORE AND OTHER RADIOACTIVE WASTES FROM THE SITE. I WANT TO ASSURE YOU OF OUR CONTINUED COMMITMENT TO THE CLEANUP OF TMI-2 AND OF OUR WILLINGNESS TO WORK TOGETHER WITH THE DEPARTMENT OF ENERGY AND OTHERS INVOLVED ON ALL ASPECTS OF THE CLEANUP.

IN CONSIDERING OUR INTERNATIONAL RESPONSIBILITIES, THE COMMISSION RECOGNIZES THAT THE PROLIFERATION OF NUCLEAR EXPLOSIVE DEVICES POSES A POTENTIAL THREAT TO THE SECURITY INTERESTS OF THE UNITED STATES AND TO THE FUTURE OF ALL PEOPLE. HENCE, WE WILL CONTINUE TO DISCHARGE OUR STATUTORY LICENSING RESPONSIBILITIES TO ENSURE THAT EFFECTIVE CONTROLS ARE APPLIED TO THE IMPORT AND EXPORT OF NUCLEAR MATERIALS, EQUIPMENT AND FACILITIES. WE INTEND TO WORK CLOSELY WITH THE EXECUTIVE BRANCH AS THE UNITED STATES PURSUES IMPROVEMENTS IN INTERNATIONAL SAFEGUARDS.

WE ALSO CONSIDER DOMESTIC NUCLEAR SAFEGUARDS AN INTEGRAL AND ONGOING ELEMENT OF OUR RESPONSIBILITY, TO BE CONDUCTED WITH THE SAME HIGH-CONFIDENCE DEFENSE-IN-DEPTH PHILOSOPHY AS SAFETY REGULATION. WITHIN THIS FRAMEWORK, WE CONTINUE TO LOOK FOR THE MOST EFFECTIVE AND EFFICIENT WAYS TO MAINTAIN A VIGILANT PROGRAM.

WE INTEND TO GIVE GREATER EMPHASIS TO PERFORMANCE REQUIREMENTS RATHER THAN PRESCRIPTIVE REQUIREMENTS TO ALLOW LICENSEES TO SELECT THE MOST COST EFFECTIVE WAY TO SATISFY SAFEGUARDS NEEDS. WE ALSO INTEND TO EXAMINE CLOSELY THE SAFETY-SAFEGUARDS RELATIONSHIP. OUR INTENT IS NOT TO RELAX THE OVERALL LEVEL OF PROTECTION

CURRENTLY PROVIDED BY SAFEGUARDS, BUT TO ASSURE THAT SAFEGUARDS REQUIREMENTS DO NOT ADVERSELY AFFECT PLANT SAFETY.

BUDGET SUMMARY

I WILL NOW SUMMARIZE THE MORE SIGNIFICANT ACTIVITIES WITHIN EACH OF OUR MAJOR PROGRAM CATEGORIES IN ORDER TO PROVIDE YOU WITH A BASIS FOR OUR BUDGET REQUEST AND TO EXPLAIN SOME CHANGES BETWEEN OUR FY 1983 AND FY 1984 RESOURCE LEVELS AND PROGRAMS.

REACTOR REGULATION	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$94.4	$91.5	$87.1
PEOPLE	748	730	709

THE NUCLEAR REACTOR REGULATION PROGRAMS DECREASE BY 18 STAFF AND $2.9 MILLION IN FY 1984, MAINLY AS THE RESULT OF A PROJECTED REDUCTION IN CASEWORK.

A STEADY INCREASE IN THE NUMBER OF POWER REACTORS OPERATING IN THE UNITED STATES WILL REQUIRE NRC TO PROVIDE FOR A CORRESPONDING INCREASE IN EXAMINATIONS AND CERTIFICATION OF OPERATING REACTOR PERSONNEL. THE INCREASE IN THE NUMBER OF OPERATING REACTORS WILL ALSO REQUIRE THE ASSIGNMENT OF ADDITIONAL PLANT PROJECT MANAGERS.

RESOURCES ARE INCLUDED TO CONTINUE OUR REVIEW OF OPERATING REACTOR SAFETY IN A SYSTEMATIC MANNER AND TO MAINTAIN A VIABLE SAFETY IMPROVEMENT PROGRAM, INCLUDING THE RESOLUTION OF UNRESOLVED SAFETY ISSUES AND GENERIC ISSUES AND THE IMPLEMENTATION OF THE HUMAN FACTORS PROGRAM PLAN.

INSPECTION & ENFORCEMENT	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$69.3	$70.9	$74.8
PEOPLE	966	996	990

THE INSPECTION AND ENFORCEMENT PROGRAMS SHOW A NET INCREASE OF 30 STAFF, PRIMARILY FOR INSPECTION ACTIVITIES ASSOCIATED WITH THE INCREASING NUMBER OF REACTORS IN OPERATION. THE BUDGET REQUEST ALLOWS FOR INCREASED EMPHASIS IN QUALITY ASSURANCE (QA) INSPECTION IN RESPONSE TO CONCERN ABOUT THE QUALITY OF THE DESIGN AND CONSTRUCTION OF NUCLEAR PLANTS.

THE NRC RESIDENT INSPECTOR PROGRAM IS FULLY OPERATIONAL. EACH SITE WITH AN OPERATING REACTOR HAS AT LEAST ONE RESIDENT INSPECTOR ASSIGNED. LIKEWISE, EACH SITE WITH A REACTOR UNDER ACTIVE CONSTRUCTION THAT IS AT LEAST 15 PERCENT COMPLETE HAS A CONSTRUCTION RESIDENT INSPECTOR ASSIGNED.

REQUESTED RESOURCES FOR EMERGENCY PREPAREDNESS ACTIVITIES REMAIN ESSENTIALLY LEVEL IN FY 1984. FUNDING INCREASES IN FY 1985 TO PROVIDE TECHNICAL SUPPORT FOR THE ANNUAL REVIEWS OF AN INCREASED NUMBER OF OPERATING REACTORS. THE NRC WILL CONTINUE TO EVALUATE ANNUAL EMERGENCY PREPAREDNESS EXERCISES CONDUCTED AT OPERATING REACTOR SITES. WE WILL ALSO CONTINUE TO VERIFY THAT UPGRADED EMERGENCY RESPONSE FACILITIES, COMMUNICATIONS SYSTEMS, AND PROCEDURES HAVE BEEN INSTALLED AT NUCLEAR FACILITIES.

THE BUDGET REQUEST FOR FY 1984 INCLUDES $1 MILLION FOR DEVELOPMENT OF A NUCLEAR DATA LINK. AN ADDITIONAL $4 MILLION IS REQUESTED FOR FY 1985. A NUCLEAR DATA LINK PROTOTYPE PROGRAM DESCRIPTION HAS BEEN DEVELOPED TO ALLOW THE NRC TO EVALUATE THE CAPABILITY OF THIS APPROACH TO PROVIDE THE INFORMATION NEEDED TO CARRY OUT THE NRC'S EMERGENCY ROLE.

MATERIALS SAFETY & SAFEGUARDS	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$35.7	$36.3	$35.7
PEOPLE	314	306	304

THE NUCLEAR MATERIALS SAFETY AND SAFEGUARDS PROGRAM ESSENTIALLY REMAINS LEVEL WITH ONLY A SLIGHT DECREASE OF 8 STAFF. WASTE MANAGEMENT AND SAFEGUARDS ACTIVITIES CONTINUE TO RECEIVE MAJOR SUPPORT. A SIGNIFICANT STEP WAS TAKEN TO IMPROVE COMMUNICATIONS BETWEEN OUR STAFF, MILL LICENSEES, AND STATES WITH MILLING OPERATIONS WITH THE RELOCATION OF OUR URANIUM RECOVERY LICENSING STAFF TO A FIELD OFFICE IN DENVER, COLORADO. THIS OFFICE, WHICH WILL WORK UNDER THE SUPERVISION OF THE NRC REGION IV OFFICE IN DALLAS, IS LOCATED NEAR THE HEARTLAND OF URANIUM MINING AND MILLING OPERATIONS.

OUR BUDGET CONTAINS FUNDS TO COMPLETE THE DEVELOPMENT OF AN AUTOMATED DATA SYSTEM SUPPORTING OUR MATERIALS LICENSING ACTIVITIES. THIS SYSTEM SHOULD SIGNIFICANTLY INCREASE OUR EFFICIENCY IN HANDLING A LARGE FLOW OF APPLICATIONS -- APPROXIMATELY 1000 PER YEAR -- ASSOCIATED WITH THIS ACTIVITY.

RESEARCH	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$209.5	$199.7	$193.3
PEOPLE	275	250	245

OUR BUDGET REQUEST FOR NUCLEAR REGULATORY RESEARCH SHOWS REDUCTIONS IN BOTH STAFFING AND FUNDING. THE $9.8 MILLION NET REDUCTION IN FUNDING IS MAINLY THE RESULT OF TERMINATION OF THE LOFT PROGRAM FUNDING THROUGH NRC. THE REDUCTION OF 25 STAFF IS PRIMARILY ASSOCIATED WITH COMPLETION OF THE DEVELOPMENT OF SOME STANDARDS, GUIDES AND REGULATIONS.

THE BUDGET INCLUDES RESOURCES FOR CONTINUED RESEARCH ON THE PREVENTION AND MITIGATION OF ACCIDENTS WHICH COULD LEAD TO SEVERE CORE DAMAGE AS OCCURRED AT TMI. WE ALSO PLAN TO REASSESS THE RADIOACTIVE SOURCE TERM BASED ON IMPROVED CHARACTERIZATION BY A SYSTEMATIC ANALYSIS OF THE FISSION PRODUCT RELEASE AND TRANSPORT. SUPPORT IS CONTAINED FOR CONTINUING OUR EFFORTS TO EXPAND THE

APPLICATION OF RISK ANALYSIS IN THE REGULATORY PROCESS, WHERE APPROPRIATE, WITH SPECIAL CONSIDERATION BEING GIVEN TO UNDERSTANDING THE UNCERTAINTIES ASSOCIATED WITH EXISTING RISK ASSESSMENT TECHNIQUES. FUNDING CONTINUES FOR RESEARCH RELATED TO PROVIDING A BASIS FOR EVALUATING THE RELIABILITY AND SAFETY MARGINS OF LIGHT WATER REACTOR COMPONENTS AND STRUCTURES, AND FOR APPLICATION OF HUMAN FACTORS ENGINEERING TO LESSEN THE POTENTIAL FOR THE HUMAN FACTOR TO DEGRADE SAFETY.

THE BUDGET REQUEST INCLUDES FUNDS FOR MODIFICATION OF AN INDUSTRY OWNED TEST FACILITY TO INVESTIGATE SMALL BREAK LOSS-OF-COOLANT ACCIDENTS IN BABCOCK AND WILCOX REACTOR CONFIGURATIONS. THE NEW PROGRAM IS PLANNED AS A JOINT EFFORT WITH INDUSTRY; SPECIFIC ARRANGEMENTS ARE NOW BEING EXPLORED. OVER THE LAST SEVERAL YEARS, THERE HAS BEEN AN INCREASE IN THE NUMBER OF COOPERATIVE RESEARCH PROJECTS. MANY OF THESE PROJECTS HAVE BEEN JOINTLY FUNDED BY NRC AND THE ELECTRIC POWER RESEARCH INSTITUTE PLUS VARIOUS COMBINATIONS OF REACTOR MANUFACTURERS, UTILITY OWNERS' GROUPS, UTILITIES, AND MANY FOREIGN COUNTRIES. NEW ARRANGEMENTS ARE BEING ACTIVELY PURSUED TO MAXIMIZE THE TECHNICAL AND COST BENEFITS FROM SUCH RESEARCH.

ADEQUATE RESOURCES HAVE ALSO BEEN INCLUDED FOR THE RESEARCH NECESSARY TO SUPPORT THE LICENSING DECISIONS FOR THE CLINCH RIVER BREEDER REACTOR.

PROGRAM TECHNICAL SUPPORT	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$27.1	$27.5	$27.5
PEOPLE	389	367	357

PROGRAM TECHNICAL SUPPORT INCLUDES THOSE OFFICES WHOSE MISSIONS INCLUDE SUPPORT OF LICENSING HEARINGS, OPERATIONAL EXPERIENCE ANALYSES OF OPERATING REACTORS AND FUEL FACILITIES, AND THE SAFETY AND SAFEGUARDS INTERFACE WITH STATE AND FOREIGN GOVERNMENTS. IT ALSO INCLUDES RESOURCES FOR A SEPARATE ORGANIZATION

FOR INVESTIGATIONS, WHICH WERE PREVIOUSLY A PART OF THE INSPECTION AND ENFORCEMENT PROGRAM. THIS NEW APPROACH WAS INITIATED LAST YEAR TO IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF INVESTIGATIVE ACTIVITIES.

THE STAFF REDUCTIONS OF 22 IN PROGRAM TECHNICAL SUPPORT ARE CONSISTENT WITH THE DECREASES IN THE MAJOR PROGRAMS. THE INCREASE IN FUNDING FOR FY 1984 PROVIDES FOR ACCUMULATING PRIOR 1981 LICENSEE EVENT REPORTS INTO AN AUTOMATED DATA SYSTEM FOR SAFETY TREND ANALYSIS OF OPERATING REACTOR EXPERIENCE.

PROGRAM DIRECTION & ADMINISTRATION	ESTIMATE FY 1983	ESTIMATE FY 1984	ESTIMATE FY 1985
$(MILLIONS)	$39.4	$40.9	$41.6
PEOPLE	731	722	720

PROGRAM DIRECTION AND ADMINISTRATION CONSISTS OF OFFICES THAT VARY IN THEIR SPECIFIC FUNCTIONS BUT, IN GENERAL, PROVIDE OVERALL POLICY DIRECTION, RESOURCE ANALYSIS AND FINANCIAL MANAGEMENT, ADMINISTRATION AND LOGISTICAL SUPPORT FOR THE AGENCY. IN PRIOR BUDGET CYCLES WE HAVE INITIATED AND ACCOMMODATED STAFF REDUCTIONS THROUGH INCREASED EFFICIENCY INCLUDING CONSOLIDATION OF FUNCTIONS. IN FY 1984 THERE WILL BE A VERY SLIGHT STAFF REDUCTION -- 9 POSITIONS -- AS WE HAVE ABOUT REACHED THE LIMIT IN OUR ABILITY TO ABSORB REDUCTIONS IN PDA RESOURCES.

CONCLUDING REMARKS

AS I STATED LAST YEAR, I SEE THE PRESENT AND NEAR FUTURE AS A PERIOD OF TRANSITION FOR THE NUCLEAR REGULATORY COMMISSION. WE ARE MAKING A TRANSITION FROM AN EXTENDED PERIOD OF RAPID GROWTH TO ONE OF RELATIVE STABILITY AND CONSTRAINED RESOURCES.

I WOULD ALSO POINT OUT THAT THE AGENCY IS STILL WIDELY DISPERSED AROUND THE METROPOLITAN WASHINGTON AREA. AS EMPHASIZED IN PAST TESTIMONY, THIS SITUATION HAS ADVERSELY AFFECTED OUR ABILITY TO carry out our responsibilities in an efficient and effective manner. By prolonging this problem, resources are being unnecessarily expended. The Commission is hopeful that the Executive Branch and the Congress can provide a solution to this problem as soon as possible.

The details of our budget request are contained in our budget submission, which has already been provided to the Subcommittee. Summary tables of our budget request are attached.

This completes my statement, Mr. Chairman. We would be pleased to answer any questions you may have.

TABLE 1

FISCAL YEAR 1984 PRESIDENT'S BUDGET—PROGRAM LEVEL BREAKOUT

[Dollar amounts in thousands]

Summary data	Actual fiscal year 1982	Estimate fiscal year 1983	Estimate fiscal year 1984	Change
Reactor regulation:				
Cost	$87,543	$94,380	$91,490	- $2,890
People	738	748	730	- 18
Inspection and enforcement:				
Cost	$59,544	$69,280	$70,910	+ $1,630
People	959	966	996	+ 30
Materials safety and safeguards:				
Cost	$37,347	$35,650	$36,280	+ $630
People	326	314	306	- 8
Research:				
Cost	$220,287	$209,500	$199,740	- $9,760
People	276	275	250	- 25
Program technical support:				
Cost	$24,205	$27,050	$27,520	+ $470
People	379	389	367	- 22
Program direction and administration:				
Cost	$37,551	$39,410	$40,860	+ $1,450
People	790	731	722	- 9
Total cost	$466,477	$475,270	$466,800	- $8,470
Total people	3,468	3,423	3,371	- 52

TABLE 2

FISCAL YEAR 1985 PRESIDENT'S BUDGET—PROGRAM LEVEL BREAKOUT

[Dollar amounts in thousands]

Summary data	Estimate fiscal year 1984	Estimate fiscal year 1985	Change
Reactor regulation:			
Cost	$91,490	$87,140	-$4,350
People	730	709	-21
Inspection and enforcement:			
Cost	$70,910	$74,770	+$3,860
People	996	990	-6
Materials safety and safeguards:			
Cost	$36,280	$35,710	-$570
People	306	304	-2
Research:			
Cost	$199,740	$193,290	-$6,450
People	250	245	-5
Program technical support:			
Cost	$27,520	$27,470	-$50
People	367	357	-10
Program direction and administration:			
Cost	$40,860	$41,620	+$760
People	722	720	-2
Total cost	$466,800	$460,000	-$6,800
Total people	3,371	3,325	-46

RECOGNITION OF NRC COMMISSION

Chairman HATFIELD. Thank you very much, Mr. Chairman.

I believe this is Commissioner Asselstine's first time as a Commissioner.

Mr. Asselstine. Yes, it is, Mr. Chairman.

Chairman HATFIELD. Does the room look differently on that side of the table?

Mr. ASSELSTINE. Just a bit. [Laughter.]

Chairman HATFIELD. Welcome. We are very happy to have you as one of our own. I guess this is Commissioner Gilinsky; you are about one of the senior members of this Commission now, aren't you?

Mr. GILINSKY. I have been here a long time, Mr. Chairman.

Chairman HATFIELD. Or the most senior. We have the most junior and the most senior.

Mr. Chairman, you are well supported here today.

Mr. PALLADINO. Yes, indeed.

THREE MILE ISLAND

Chairman HATFIELD. Thank you for your testimony.

Let me turn to some questions on the Three Mile Island cleanup, if I could.

First of all, could you give us the status and update on the cleanup of TMI-2.

Mr. PALLADINO. Mr. Chairman, as you know, there has been emphasis placed in the media or in the past on cleaning up the water in the containment building. This was through the demineralizer system.

That has been pretty well accomplished. There have been entries into the containment and there have been efforts made to clean up the areas where people have to work.

In addition, there were steps taken to insert a specially designed TV camera into some of the control drive mechanisms that were removed to explore the condition of the core. Rather revealing photographs were taken. We were able to see the composite of the materials including pieces of pellets, some melting, and also some of the debris.

The licensee is taking steps now to plan for removal of the head. This, of course, will require removal of many of the control mechanisms. In preparation for that they are looking at equipment that will be used. They have identified also the radiation level on the underside of the head. It is higher than they had first thought and on which they had planned. So they are going to have to readjust their planning to accommodate this higher level of radiation.

Chairman HATFIELD. Are there any potential health and safety dangers due to this slow down, or slow up, in terms of this project of cleanup of these problems?

Mr. PALLADINO. There are always possible problems. We don't anticipate these in the near future, but prolonging the cleanup for a long period of time has resulted in exposing some of the tubes at the bottom of the reactor vessel that bring in the instrumentation to atmospheres for which they were not designed, although that picture has improved now that they have cleaned up some of the water. Still it is not clear that erosion may not be taking place and there is always the possibility that some of these may begin to leak.

I think great care has to be taken in removal of the head because this will expose the interior of the core eventually to the pool water. Care must be taken to make sure that none of the debris starts to circulate around in the pool and thereby cause problems. This must be part of the very careful process that is underway.

Chairman HATFIELD. Are you aware of the recent charge made by a private engineer on this project who claimed that there were shortcuts and quality assurance violations occurring in the program?

Mr. PALLADINO. Yes, sir, Mr. Chairman, we are. We have them under investigation by our Office of Investigations.

Chairman HATFIELD. You don't have any conclusions yet on those charges?

Mr. PALLADINO. No, sir, we do not.

Chairman HATFIELD. Would you say are you generally or do you have problems or reservations about the management by the utility and contractors in the operation of the cleanup effort? Are you generally satisfied with the management of the cleanup program, management as under the utility and contractors that are involved?

Mr. PALLADINO. I thought so until we got these new allegations. I don't mean to say that it is necessarily wrong. But——

Chairman HATFIELD. So you are reserving that judgment on that question. You would at this point until you have concluded your investigation of these new allegations?

Mr. PALLADINO. Yes, sir. Mr. Chairman, I have with me Mr. Harold Denton, who is the Director of the Office of Nuclear Reactor Regulation. He has been following this closely and perhaps I should call on him to add any supplemental information that might be appropriate.

Chairman HATFIELD. I would be very happy to hear from Mr. Denton.

Mr. DENTON. My name is Harold Denton, Director of the Office of Nuclear Reactor Regulation. In addition to the advances that the Chairman mentioned at the island, there have also been a number of waste shipments from the island which diminish the hazard. So, essentially all of the low-level EPICOR liners have been showing up at Idaho or Hanford which are facilities of the Department of Energy and half or two-thirds of the high-level liners have also been shipped to DOE facilities.

The cleanup of the inside of the containment is going slower than predicted. It is proving more difficult than any one anticipated to reduce the airborne levels of radioactivity and to reduce the general exposure. The licensee made 175 or 200 entries into the containment. A lot of that has been in an effort to decontaminate the inside. That is still going slowly. The present best estimate of the licensee for completing the cleanup is about mid-1988 assuming adequate funding and no contingencies that have been foreseen.

PROJECT MANAGEMENT

Chairman HATFIELD. Mr. Denton, up until these recent allegations how did you assess the general management of this project?

Mr. DENTON. We thought it was improving. We felt that in general the reorganization that had been undertaken with Bechtel assuming a major role had contributed to somewhat faster decisionmaking. We saw some progress being made in the cleanup that we hadn't seen earlier. The allegations as you mentioned were that there were problems with the testing calibration and refurbishing of the polar crane.

It was alleged that the Bechtel team is moving too fast and taking shortcuts and that there was NRC-GPU collusion. It is because of those allegations that the Commission has ordered an investigation.

Chairman HATFIELD. Is this a review from within the Agency on these allegations or is it an independent role or participation?

Mr. PALLADINO. Mr. Chairman, there are three aspects to the allegations.

One of them has to do with harrassment and intimidation of the people who were making the allegation.

One of them has to do with the adequacy of safety reviews and the third has to do with the allegation of collusion on the part of NRC personnel.

We have the Office of Investigation coordinating all three aspects but the investigation will involve for the NRC collusion our Office of Inspector and Auditor and, for the Bechtel issues, will be supported by technical personnel from our staff.

Chairman HATFIELD. So with the auditor and inspector, did you say that will give the credibility of not having an in-house control investigation, on that part of the charge?

Mr. PALLADINO. The Office of Inspector and Auditor has the general responsibility for oversight of the performance of NRC people. So that is their job and they do it quite regularly.

This we feel is consistent with the charge that they have from the Commission.

Mr. ASSELSTINE. Mr. Chairman, they are essentially equivalent to an inspector general.

FEDERAL ROLE IN CLEANUP

Chairman HATFIELD. I would hate to spend the time and effort only to have a lack of credibility on that one phase of collusion that has been charged at this point.

Mr. Chairman, in your written statement you indicate, and I will quote, "Safe and expeditious cleanup is one of NRC's highest priorities. Direct responsibility, of course, rests with the licensee."

I assume that in this statement you are underscoring what has been the Department of Energy's stated position; that is, cost of the cleanup remains with the owner.

Mr. PALLADINO. Yes, sir.

Mr. Chairman, DOE has agreed to take the core. Being severely damaged, it has a lot to learn from it. But so far as the total financing is concerned, it is not coming from the Federal Government.

The GPU corporation has put together a pattern of funding that includes contributions from the State of Pennsylvania, State of New Jersey, contributions from GPU, and insurance. There is some hopefulness that they might get some income from TMI-1 and then they are also looking for additional funding from EPRI.

Chairman HATFIELD. Are there any obstacles today for the financing of the cleanup or do you foresee obstacles or problems in the near future relating to the financing of the cleanup?

Mr. PALLADINO. There are always possibilities for hangups because the whole funding package is not that firm.

For example, they are counting on all sources from TMI-1 startup. When that will take place if it is approved there is an open question. So the amount of money in that given time frame would be questionable.

Chairman HATFIELD. I have made a number of visits into Pennsylvania in the last year. It seems like every time I visit Pennsylvania, whether it is way out in Lancaster County or wherever it might be, in an urban area, the local press always poses the question to be as chairman of the Appropriations Committee as to what Federal role they may expect us to develop in helping to finance the cleanup.

I have said consistently that I, at this point, do not see a Federal role in financing the cleanup. Then usually after that appears in the paper I get a strong letter from Governor Thornburgh about sort of a negative attitude that I have taken on the issue.

Why do I keep getting that feeling that somehow there is an expectation somewhere in the State of Pennsylvania that we are going to ultimately be a part of that financing scheme of this cleanup?

Mr. PALLADINO. I don't know to what extent it is an expectation rather than hope. There was a period of time when bills had been introduced to provide Federal funding.

Chairman HATFIELD. I know Senator Heinz has told me about that.

Mr. PALLADINO. They didn't get anywhere. So I think the expectation is more hope than reality.

Chairman HATFIELD. We are all speaking from the same soap box, are we not. At this point, in terms of your agency and the DOE and the position that I express when I am asked is, that this is the responsibility of the licensee, the owner, and the State and local areas?

Mr. PALLADINO. I have personally expressed somewhat different views. I might be getting in trouble. I don't mean to.

Chairman HATFIELD. I am wondering where they are getting these, I guess.

Mr. PALLADINO. However, I haven't planted them in the Governor's mind. [Laughter.]

Chairman HATFIELD. Do you see a Federal role in the financing of the cleanup?

Mr. PALLADINO. My view is that——

Chairman HATFIELD. I am talking other than R&D.

Mr. PALLADINO. Yes. I appreciate that. I can only speak for myself. I am sure this isn't shared by other Commissioners. Maybe it is.

Chairman HATFIELD. I am going to ask my friend, Commissioner Gilinsky, in a moment.

Mr. PALLADINO. But I feel that this ought to be cleaned up as rapidly as possible and learn what we ought to from it. We should learn from it as much as we possibly can and that the dollars that are gained there can be used throughout the industry and, therefore, help reactors in all parts of the country.

So, I have encouraged whatever sources that can be made available to be made available. If that includes some Federal funds, I would support it.

Chairman HATFIELD. Mr. Gilinsky, would you care to comment on this?

Mr. GILINSKY. Strictly speaking, it is not something that our agency deals with. We are concerned that whatever is done should be done properly in accord with the public health and safety. But for myself, since you asked, it seems to me it poses difficulties to provide Federal funding in this case since there are a lot of other cases where there have been prolonged reactor shutdowns or reactors that didn't get completed.

People are going to have to pay for mistakes in those cases, too. I don't really see a way to distinguish one from the other.

Chairman HATFIELD. We have had some problems out in our part of the country too, as you know.

Commissioner, are you satisfied that the owner and the State and other entities within the region of Three Mile Island are doing all they possibly can and assuming this responsibility that we believe rests with them in terms of providing finances both now and down the road?

Mr. GILINSKY. To tell you the truth, I have not stayed very close to that recently. I don't have a firm view. I could supply one to you if you would like.

There was at one point a certain amount of argument over whether their public utilities commission would allow these charges to be passed on. To be frank, I don't know where that stands right now.

Chairman HATFIELD. Commissioner Asselstine?

Mr. ASSELSTINE. Mr. Chairman, my impression was that many utilities were pursuing their contributions under the general framework of the Thornburgh plan and the legislation that was considered by the Congress last year, even though that legislation was not enacted.

So my impression was that there was an effort by other utilities to go forward voluntarily with contributions.

Chairman HATFIELD. The national utilities?

Mr. ASSELSTINE. That is right.

Chairman HATFIELD. As the Governor's plan was originally stated?

Mr. ASSELSTINE. That is correct.

Chairman HATFIELD. Is there progress, you say, in this?

Mr. ASSELSTINE. My sense is that there has been some progress made. I think there have been announcements by some utilities that they did intend to go forward voluntarily with those contributions, even in the absence of legislation.

I might add for myself on this question of the funding issue, for a long time it appeared to me that the Thornburgh plan was basically the only thing going—the only effort to really help solve the impasse of the funding problem and move the cleanup ahead.

I think I share the same view that my colleagues do and all members of the Commission have in the past, that our view isn't so much where the money ought to come from, but that the funds ought to be made available to move ahead expeditiously with the cleanup.

As Mr. Denton mentioned, the cleanup has not moved as fast as a lot of us would have hoped, partly due to technical difficulties, and also partly due to the funding limitations.

For myself at this point, if the utilities are able to go forward voluntarily with contributions and if the Federal research and development money is available and the other money becomes available from the rate payers or from the utilities that have owned and operated the TMI plant, at this point I don't see a strong need for another Federal financial commitment above and beyond research and development.

But to a certain extent that is dependent upon voluntary contributions and continuing progress on the cleanup.

GPU SUIT AGAINST FEDERAL GOVERNMENT

Mr. GILINSKY. I might add GPU is suing the United States for $4 billion.

Chairman HATFIELD. What is the basis of their suit?

Mr. GILINSKY. That the accident would have been prevented had the Government supplied them with information about other incidents, similar incidents.

In effect, that they were not regulated strictly enough.

Chairman HATFIELD. What is your view?

Mr. GILINSKY. I think the suit is without merit. It seems an odd thing for them to be saying.

Chairman HATFIELD. They want it both ways, don't they?

Mr. GILINSKY. I think so, Mr. Chairman.

Chairman HATFIELD. It is interesting how we get into some of these things where people want government off their back and out of their business and everything else until there is some kind of a financial obligation or problem and then the Government is one of the first people they turn to.

Gentlemen, I don't envy your role in this business. It is not an easy business today. I am really grateful that there are people like you who are willing to take on this task.

Mr. PALLADINO. Mr. Chairman, I have just been handed a note that says with regard to the funds from the electric utility industry, as yet no funds have been committed, although as Mr. Asselstine said, some utilities are in the process——

Chairman HATFIELD. None have been actually received?

Mr. PALLADINO. None have been committed.

Chairman HATFIELD. I see. So, we are still waiting for the Thornburgh plan to be implemented.

I certainly respect your statements to the effect that the main task is to get this job done. I am of the opinion, of course, that there has to be every kind of enforcement that the Federal Government has at its command to achieve this and the technical roles of R&D that are involved certainly is a legitimate Federal role. If it should ever reach a point, there is just no capability to get the job done short of the Federal Government, you know, I am not going to close the door to that down the road because the objective is still to get it cleaned up.

I certainly don't think there is anything we should do short of having full performance and total capability of that performance demanded by the State from the State and local ownerships.

Mr. PALLADINO. I certainly appreciate your position. My position stems from trying to get it cleaned up as soon as possible.

ADDITIONAL SUBMITTED QUESTIONS

Chairman HATFIELD. We have other questions, gentlemen, that are for the record that we will supply to you.

[The questions and answers follow:]

STATUS OF THREE MILE ISLAND CLEANUP

QUESTION 1. What is the status of the TMI-2 reactor cleanup? Please briefly explain what has been accomplished and what remains to be done.

ANSWER.

Four years have now passed since the accident at TMI-2 and, although some cleanup activities have been completed, the most difficult tasks remain. The major accomplishments to date include the following:

- All of the liquid radioactive waste that was generated and collected in the auxiliary building has been processed and the processed water is currently in storage.
- The large noble gas inventory (krypton 85) that collected in the reactor building has been purged to the environment.
- The 650,000 gallons of highly contaminated liquid waste that collected in the reactor building sump has been processed and the processed water is in storage in onsite tanks. There are ongoing decontamination activities (e.g., water spraying) in the reactor building which generate additional contaminated sump water, however, this water is periodically removed for processing to remove the collected activity. Processed water is used for these activities to minimize waste water generation.
- The waste water in the reactor coolant system (90,000 gallons) has been processed.
- Approximately 70% of the contaminated areas in the auxiliary building has been decontaminated, but the most contaminated cubicles were bypassed.
- Shipments to date of abnormal waste to DOE facilities include 35 out of a total of 50 EPICOR-II prefilters and 7 out of a total of 12 Submerged Demineralizer System (SDS) high activity zeolite liners.
- The leadscrews to the 61 control rods and 8 axial power shaping rods have been uncoupled and placed in the parked position as a necessary prerequisite to reactor vessel head removal.
- Visual inspections of the damaged core at three different locations were conducted to determine the nature and extent of the damage and aid in defueling planning.
- The reactor building polar crane has been refurbished and efforts to qualify the crane for lifts up to 170 tons have begun. The polar crane is necessary to lift the reactor vessel head and plenum.
- As an aid to planning for reactor vessel head lift, measurements of the radiological conditions underneath the head were taken and yielded unexpectedly high results, 500 to 600 R/hr. with the vessel filled with water. More measurements are planned with the water level lowered to simulate conditions of a dry head lift.
- Washdowns of contaminated walls, floors and equipment surfaces in the reactor building have been ongoing in an

effort to remove loose or smearable contamination and ultimately lower reactor building atmosphere particulate activity levels.

- The licensee launched a multi-phase dose reduction program in late 1982. This program includes the shielding of known sources of exposure such as floor drains, hatches, penetrations, the enclosed stairwell, and the elevator shaft. Although these efforts have resulted in some significant reductions in dose rate in some localized areas (e.g., dose rates from the elevator shaft), the pervasive general area radiation levels have changed little.

As described above, some significant progress has been made in the cleanup and some important milestones have been reached. However, the most complex and difficult work lies ahead as the licensee focuses his efforts on defueling the reactor and placing the plant in a safer conditions. The work that remains includes the following:

- Load testing and qualifying the polar crane for reactor vessel head lift and subsequent defueling activities.
- The further characterization of the radiological conditions underneath the reactor vessel head will be performed to predict the conditions workers would be exposed to during the planned "dry" reactor vessel head lift. The characterization is necessary to determine if a dry head lift is feasible or if radiological considerations will mandate a "wet" head lift with the refueling canal partially flooded.
- The planned dry reactor vessel head lift is scheduled for mid-summer of this year but is largely dependent on the results of the underhead characterization and the ability of the licensee to decontaminate or otherwise shield the high levels of contamination on the vessel upper internals (plenum). If a wet head lift becomes necessary, the schedule for the head lift will be delayed for an, as yet, unspecified period because of prerequisite activities for a wet lift.
- The remainder of the abnormal waste containers (EPICOR-II prefilters and SDS liners) need to be shipped to DOE facilities.
- Decontamination of the containment will continue in an effort to reduce particulate activity levels in the reactor building atmosphere.
- Additional reduction measures need to be employed to lower worker exposure within the containment.
- Plenum removal.
- Fuel and fuel debris removal.
- Decontamination and subsequent removal of tanks located in the "A" fuel pool.
- Packaging and shipment of fuel and other abnormal waste generated in support of defueling activities.
- Removal of the contaminated sludge from the reactor building basement.
- Surface decontamination and internal piping system flushes in the auxiliary building.

- Surface decontamination in the reactor building, including the possible scarification of badly contaminated concrete surfaces.
- Decontamination of the corrosion layer of the piping constituting the reactor coolant system pressure boundary.
- Disposal of the processed accident water.

QUALITY CONTROL VIOLATIONS

QUESTION 2. Recently, a private engineer working on the cleanup charged that shortcuts and quality assurance violations were occurring. It was reported that NRC also had some problems with the polar crane program and plans to lift the reactor head from the vessel at TMI-2. Would you comment on this situation? Are you satisfied with the management (by the utility and contractors) and operation of the cleanup effort?

ANSWER:

The NRC's Office of Investigations is investigating Mr. Parks' allegations concerning unsafe management practices in the cleanup of TMI Unit 2. Subsequent to the initial allegation, NRC received another affidavit from another employee at TMI-2. This individual appears to have many of the same concerns as Mr. Parks. The Office of Investigations field work on these matters will continue.

The NRC review of the load test for, and subsequent use of, the polar crane for the planned head removal is currently ongoing. This review includes consideration of the procedures for conducting a load test of the crane and overall safety evaluation of its intended uses. At this time the licensee is developing responses to NRC staff comments on these matters.

The NRC staff approved on August 6, 1982, the licensee's present organization which integrates the Bechtel and GPU personnel. Once the new organization was fully functioning, the efficiency was significantly improved over the previous organizational structure. As the work progresses we would expect even greater improvements in efficiency of the cleanup operation. The licensee recently requested changes to its management organization. The NRC staff is currently reviewing the proposed changes with regard to their impact on the licensee's ability to safely and expeditiously execute the cleanup.

HEALTH AND SAFETY QUESTIONS

QUESTION 3. What are the potential health and safety dangers of that area due to the slow pace of cleanup?

ANSWER.

The slow pace of the cleanup resulting in delays increases the probability of an incident including recriticality or uncontrolled leakage from the reactor coolant system. The damaged fuel contained in the reactor vessel will continue to pose a serious threat until the fuel is removed.

Currently TMI-2 is in a safe shutdown condition, but no assurances can be provided that the existing stable conditions will be maintained over a protracted period. Since the accident, equipment has been deteriorating due to lack of maintenance. Each delay in the cleanup, no matter what the cause, increases the probability of an uncontrolled release of radioactive material. An uncontrolled release of radioactive material to the TMI-2 containment building would cause an increase in worker exposure and possibly an exposure to the offsite public. Further, until the fuel and fuel debris are safely removed and packaged for offsite shipment, there exists the potential for recriticality due to boron dilution in the reactor coolant system. The boron concentration in the reactor coolant is monitored on a regular basis to assure adequate shutdown margin and prevent recriticality. Fuel removal and packaging is the licensee's highest priority and it is imperative that these activities be pursued as safely and expeditiously as possible to place the plant in a safer condition. Inasmuch as the refurbishment, testing, and use of the polar crane is in the critical path to defueling, any delay in the availability of the crane increases the probability of these adverse events. The polar crane is designed to move heavy equipment within the containment building. Before defueling can begin heavy loads such as missile shield, the reactor vessel head, and the plenum must be removed in sequential fashion.

QUESTION 4. On page 18 of your written statement, you indicate that "safe and expeditious cleanup is one of NRC's highest priorities. Direct responsibility, of course, rests with the licensee." Are you indicating as DOE has stated repeatedly, that the cost of cleanup remains with the owner?

ANSWER.

The NRC has consistently taken the position that the responsibility for the cleanup at TMI-2 from a financial as well as from a technical and safety point of view rests solely with the licensee. Whereas the NRC views its responsibility as one of overseeing the licensee's actions, this in no way removes any responsibility from the licensee.

FINANCING CLEANUP

QUESTION 5. What are the major obstacles to financing the cleanup of TMI-2? Are the State PUCs and the utilities providing financial assistance?

ANSWER.

GPU has adopted the cost-sharing plan proposed by Governor Thornburgh of Pennsylvania (the "Thornburgh Plan"). In accordance with this plan substantial commitments have already been made by the federal government, by GPU's Pennsylvania and New Jersey customers (through state PUC action), by the Commonwealth of Pennsylvania and by GPU's property insurers. The major source not firmly in place is a suggested $190 million contribution from the nuclear industry. However, a voluntary plan suggested by the Edison Electric Institute (EEI) in January 1983 has so far received approximately $50 million in pledges from the electric utility industry. EEI and GPU are optimistic that a total of at least $100 million in pledges will be received, the minimum required to make EEI's plan operative.

RESTART OF TMI-1

QUESTION 6. What obstacles remain to the restart of TMI-1?

ANSWER.

The repair and return to service of the two steam generators is the pacing item regarding plant readiness for TMI-1 restart. Work is about 85 percent completed. The principal remaining work involves tube stabilization, reactor coolant system cleanup, leak testing and hot functional testing. Based on completion of the steam generator repairs, plant readiness for restart is currently estimated by the licensee for July 1983. The NRC must review and approve the adequacy of the repair for continued plant operation. (i.e., the restart decision is predicated on an acceptable repair of the steam generators.)

Prior to the restart of TMI-1, the Commission must lift its July 2, 1979 shutdown Order based on satisfactory completion of short-term actions specified in a subsequent Order dated August 9, 1979, and other actions originating from the restart hearing process. When the licensee completes these items and the NRC staff verifies that the items have been satisfactorily completed, the Director of Nuclear Reactor Regulation will so certify to the Commission. As of March 31, 1983, the licensee completed about 80% of the items required. Over half of the remaining items involve testing which requires the plant to be either hot or at low power (e.g., low power natural circulation testing). Actions needed by the licensee and the staff for those items required before hot functional testing are presently estimated to be completed in May 1983.

There are also other matters outside the scope of the Commission Order and associated hearing process that need completion or resolution before restart, but these do not appear to be controlling the schedule at this time. These matters include: the current evaluation by the NRC staff of allegations raised during the trial proceeding between Babcock & Wilcox and GPU (the licensee) about falsification of leak rate data at TMI-2, to determine whether this issue changes the previous staff position on the licensee management integrity for operating TMI-1; completion of those fire protection modifications required by 10 CFR Part 50.48, the current regulations on fire protection; other matters where the NRC staff relied on a license commitment to resolve certain concerns such as those resulting from NRC inspections or the NRC review of Licensee Event Reports; and steam generator rework if staff concludes it is a significant hazards issue. In addition, the NRC will conduct a Restart Inspection Program prior to restart that may produce additional items that would be addressed before restart.

CONSOLIDATION OF COMMISSION ACTIVITIES

QUESTION 7. What is the status of your efforts to consolidate the Commission's activities into one location?

ANSWER.

The Commission's efforts to consolidate NRC activities into one location have been fruitless. No progress has resulted from our repeated efforts to effect an interim consolidation with the assistance of the General Services Administration. In January 1982 the GSA Acting Regional Administrator, Bertrand Berube, recommended that the NRC move out of the Matomic Building entirely and relocate the Commissioners and their immediate staffs in space to be leased in Bethesda, Maryland. This proposal had been examined by the NRC in the summer of 1981 and discarded as not responsive to the Agency's needs, since it would only add to the problem of scattered buildings and would not bring the Agency together.

In March 1982, GSA Regional Administrator Berube wrote to Chairman Palladino that GSA had obtained Congressional authorization for construction of a building to consolidate NRC in Silver Spring, Maryland, and would request preliminary design funds in GSA's fiscal year 1984 budget. Previously requested funding for the Silver Spring project had been deleted by OMB. Even if 1984 funding had been approved, a building probably would not have been available until the 1990's.

In May 1982, General Services Administrator Carmen informed NRC Chairman Palladino that he was convinced that "...neither interim consolidation of NRC in the Matomic Building, nor permanent consolidation in the District of Columbia is in the best interest of the Government." Administrator Carmen said he was willing to pursue a prospectus for acquisition of new leased space in Bethesda for the Commissioners and their staffs.

In October 1982 Chairman Palladino, responding to a letter from General Services Deputy Administrator Ray Kline, reminded Mr. Kline that an urgent need to solve the NRC's interim housing problems still existed, and urged him and Administrator Carmen to reconsider our longstanding request to implement the interim plan to consolidate in the Matomic Building in downtown Washington, and the Woodmont Triangle area in Bethesda. Mr. Kline's reply of November 15, 1982 stated that existing vacant space in the Matomic Building was committed to another agency, and that the only remaining alternatives for NRC were to maintain the status quo or move the Commissioners to Bethesda.

The NRC now has a situation in which the NRC Chairman, the House and Senate Authorizing Committees, and the House Committee on Appropriations, as well as the President's Private Sector Survey on Cost Control are all on the record favoring an interim consolidation along the lines NRC has proposed since the accident at Three Mile Island, while General Services Administrator Carmen presumably still stands by his May 1982 statement that neither interim consolidation of NRC in the Matomic Building nor permanent consolidation in the District of Columbia is in the best interest of the government.

QUESTION 8. How does this lack of progress affect the Commission's efficiency?

ANSWER.

It is extremely difficult to quantify in dollars or efficiency ratios the cost to the Government that is attributable to the existing dispersion of NRC staff among 10 leased buildings in the District, Bethesda, Silver Spring, and Rockville. However, the current cost to provide shuttle service and physical protection services for these varied locations exceeds $1.8 million annually. The General Accounting Office reported in June 1981 that an interim consolidation along the lines preferred by NRC could cost between $3 million and $5.7 million, depending on how many tenants would be displaced by NRC's move into the Matomic Building. GAO estimated annual savings resulting from consolidation at $1 million annually and concluded that:

> "We believe the potential intangible benefits to NRC of an interim consolidation over a 5- to 10-year period are worth the estimated financial cost of either the proposed or the alternative interim option. Also, as we stated in our earlier report, the financial cost of an NRC interim consolidation diminishes in importance if the planned permanent facility for NRC is delayed."

LICENSING REFORM LEGISLATION

QUESTION 9. Briefly describe the proposed licensing reform legislation the Commission has submitted to Congress.

ANSWER.

The proposed legislation amends sections 185 and 189 of the Atomic Energy Act and adds new sections 193 and 194. The amended section 185 would permit the issuance of what would be called a combined construction permit and operating license (185b.); would allow the Commission to rely on the certification of need for a facility and of the alternative sources of generating capacity upon verification by an appropriate governmental authority (185c.); and would stabilize determinations made on issues decided in licensing proceedings (185d.).

The proposed revision of section 189 provides: deletion of mandatory construction permit hearings where no hearing is requested (189a.); includes site permits, design approvals and combined CP/OLs as types of proceedings for which hearings must be held (189a.); specifies what issues are open for a hearing prior to operation under a combined CP/OL; permits the use of hybrid hearings (189b., c.); and establishes requirements for conducting a hybrid hearing (189d.).

Section 193, Early Site Review, and Section 194, Approval of Design, are companion amendments which have been proposed to facilitate the early identification and resolution of both site and design issues. Both sections provide for ten year licenses, renewable for not less than five nor more than ten years; deferral of fees; referencibility of determinations made in site permit or design approval proceedings; special handling of NEPA matters; and stability of decisions made in site permit or design approval proceedings.

The following "NRC Draft Legislation Section-By-Section Analysis" and table for "Comparison of NRC and DOE Licensing Reform Bills" provides a complete description.

Additional views of Commissioner Roberts are attached.

ADDITIONAL VIEW OF COMMISSIONER THOMAS M. ROBERTS

I strongly support the goal of reforming the NRC's licensing process so that greater stability, rationality, and efficiency are achieved. Thus, I strongly supported the legislation proposed to the Commission by Jim Tourtellotte, Chairman, Regulatory Reform Task Force. That legislation provided, among other things, for early resolution of various licensing issues and for a one-step licensing process.

The legislation proposed by Jim Tourtellotte has now been substantially revised by the Commission. The changes made by the Commission include:

(1) The provision of a second hearing opportunity to address issues such as emergency planning and quality assurance;

(2) Notice of this second hearing opportunity one year prior to facility operation;

(3) Limitations on the use of combined construction permit/operating license procedures so that only the present types of commercial power reactors are eligible;

(4) Addition of license, site permit, and design approval renewals to the list of actions for which a hearing opportunity will be provided;

(5) The preparation of an environmental impact statement prior to issuance of a site permit; and

(6) The requirement that standardized designs be approved only in case-by-case adjudication, not by rulemaking.

I have reservations about each of these changes as well as about other provisions in the bill. More importantly, however, it seems to me that the Commission's changes circumvent its stated goals of (1) creating a more efficient vehicle for the resolution of disputed safety and environmental issues and (2) avoiding the imposition of regulatory uncertainty and unjustifiable economic burdens on utilities and their ratepayers. In sum, the legislation proposed by the Commission to "reform" its licensing process appears either to "codify" the status quo or to impose additional requirements, especially in the area of notice.

This view will deal only with the three issues which most concern me. My principal concern with this legislation is its provision of a second hearing opportunity when that hearing is not required to protect public safety. This additional hearing opportunity would come at a time when the only tasks remaining to be accomplished are (1) verification of the plant's design and (2) inspection and testing of the plant to insure that it has been built in compliance with the application. To provide a hearing opportunity after the plant is constructed introduces regulatory uncertainty and inefficiency into an already cumbersome process.

Additionally, the provision of a second hearing only one year prior to operation could result in the hearing actually delaying plant operation, a phenomenon which arguably has not yet happened. Presently, the prehearing stage of an adjudicatory operating license hearing begins several years in advance of facility operation because it is triggered by submission of an operating license application. Under the legislation proposed by the Commission, the preoperational hearing is triggered by plant operation. The informal phase of a hybrid hearing is generally equivalent to the prehearing stage of an adjudicatory hearing. Both the informal phase of a hybrid hearing and the prehearing stage of an adjudicatory hearing include, among other things, admission of parties, admission of contentions, discovery, and prehearing conferences to narrow issues. The Commission's experience with these types of activities shows that they generally require more than one year to complete. I know of no reason to expect these activities to take less time in the preoperational hearing merely because they are part of the informal phase of a hybrid hearing.

Moreover, as a general matter, the issues of emergency planning and quality assurance are among the most time-consuming issues presently litigated in operating license proceedings. Thus, the preoperational hearing presents a potential for delay greater than that extant in the present licensing process. As a practical matter, the only way around this potential delay will be a request by applicants that the Staff notice the opportunity for a hearing several years in advance of operation. There is some irony in the thought that applicants would have to request the hearing process be initiated in order to avoid delay!

Finally, I have a philosophical problem with the Commission's decision to provide a second hearing opportunity. The Commission's decision rests on two assumptions--first, that factual disputes should be resolved in adjudicatory hearings be they hybrid or formal and second, that inquiries into safety issues should be handled by trial-type procedures. Under present Commission rules, if a member of the public is aware of a safety problem, that person may come to the Commission and request an investigation. Furthermore, that person may request a hearing. If the Commission decides that there is a safety issue which should be resolved by trial-type procedures, the Commission can grant a hearing. Thus, the opportunity for a hearing already exists; a hearing will be provided if the Commission determines that the safety issue in question is best resolved through that mechanism. What I object to is the requirement to provide an adjudicatory hearing, whether it be hybrid or formal, after every plant is constructed. In that context, it is important to remember that the paramount responsibility of the NRC is not the provision of trial-type forums in which members of the public can attempt to explore their concerns about nuclear power plants. Rather, the NRC's paramount responsibility is to protect the public health and safety. Resolution of technical issues in order to protect the public health and safety is the province of the Commission's highly paid and highly trained scientific and technical staffs.

A second problem with this legislation is its implicit assumption that hybrid hearings will be a more efficient vehicle for the resolution of disputed safety and environmental issues and thus that explicit authority to conduct such hearings will constitute regulatory reform. There are many arguments that one can make to dispute this assumption but I will merely quote from the views of Tony Roisman, an attorney on the Ad Hoc Group on Regulatory Reform Proposals and formerly an intervenor in many Commission licensing proceedings:

> [W]e all realize it is really a dog fight down there in the hearing between people who are unalterably opposed to each other. We are not just talking about the kinds of issues where one can say, well, I can see the other guy's side, but I would sure like to have a crack at making my point. You are dealing with people who are really going to the mat. There is a lot of contentiousness.
>
> What troubles me about the hybrid hearing--and I had a small contact with it during the time I worked on the GESMO hearings, when they were in existence, is it looks like they create more places for that inherent contentiousness to find outlet in irrelevant issues. If two people are disagreed as to whether a particular emergency plan for a plant is going to be adequate, one says it is inherently inadequate, you should never license the plant; the other says it is perfectly good, we can put it here, what you would like to not have happen is for them to spend any significant time arguing about peripheral issues, about whether they are going to argue about that issue. You would like them to get in there and argue about that issue.
>
> The hybrid hearing invites first, a legislative type hearing. All right, we have already taken a lot of time on a legislative type hearing. Then a series of hearings on which of the legislatively presented points of view deserve the next step. The next step, as it was in GESMO, just might be discovery. I have got to see some more information, how did you reach that conclusion, Doctor? We now have discovery.
>
> Now we have another set of hearings on how many of the next set of issues deserve to move to the next plateau, the next plateau being we are going to have some cross examination. And each of those decisions is a point of contention. Each one is one on which the parties spend a lot of time fighting. Each is subject to review by a court. And from the standpoint of the Agency, and again, from the standpoint of stability, the one kind of decisions which this agency has uniformly been successful in deciding, in not getting review of substantive issues, every judge, no matter how nastily they may have written about the Commission at any time, you ask them to decide whether it should be pump A or pump B, and they say that is agency expertise. What they will review is your decision to keep an issue in, put an issue out.
>
> And it seems to me that the hybrid hearing will create a new era of litigation unparalleled in this Agency that will cause more turmoil and confusion--and remember, I speak now from the perspective of a former intervenor counsel, that every time the Commission steps in the wrong procedural

> hole, it is like creating a little time bomb. It is ticking. It ticks along going through a whole hearing, having stepped in the wrong hole, and you don't find out that it was the wrong hole until three years later, or in the case of nuclear waste, ten years later, and then all of a sudden, boom, the thing explodes and hundreds of hours of hearing time, thousands, are down the tube.

The third problem I have with the legislation proposed by the Commission concerns its failure to address the problem of backfitting. The Commission spent a good deal of time debating what standard should be used to allow relitigation of an issue previously decided in a proceeding. The Commission settled on the following standard:

> The Commission shall not modify any final determination on an issue that has been considered and decided in any proceeding . . . unless the proponent of the request for such action makes a substantial evidentiary showing . . . that such action is required to comply with this Act, other provisions of Federal law, or the Commission's regulations.

Regardless of how difficult making that showing might appear, in reality, the proponent of modification of a prior Commission determination need only show that the Commission has promulgated new requirements. Until the Commission promulgates a backfit regulation which would control the application of new requirements to reactors which have received a license and been constructed in accordance with that license, any final determination made in a proceeding can be relitigated by a showing that the Commission has promulgated new requirements related to that determination.

NRC DRAFT LEGISLATION SECTION-BY-SECTION ANALYSIS

Section 2. Findings and Purposes

This section supplements sections 1, 2 and 3 of the Atomic Energy Act which set forth the declaration, findings and purpose of the Act. This section highlights the major provisions of this bill which are being enacted for the general purpose of improving the quality, effectiveness, and efficiency of the licensing process for siting, construction and operation of nuclear facilities.

Section 101. Construction Permits and Operating Licenses. This amends section 185 of the Atomic Energy Act, a section which establishes the procedures to be followed by the Commission in authorizing construction permits and operating licenses for nuclear facilities.

Subsection a. of section 185 as it would be amended authorizes the Commission to grant a construction permit for a production or utilization facility and, upon the completion of construction to grant an operating license. This subsection restates existing authority with one exception. This legislation would delete the requirement for specification of the earliest and latest completion dates for construction permits. The existing provision has produced unnecessary paperwork and expenditure of resources without assuring that construction is diligently pursued. Moreover, the provision in current section 185 for earliest and latest completion dates made sense when it was included in the Act in 1954 because the Federal Government would be owning the fuel and would need to allocate special nuclear material between the civilian nuclear power and defense programs. It was important for AEC to predict completion dates (and hence operation commencement dates) with accuracy so that civilian requirements for special nuclear material could be predicted accurately and planned for properly. The Federal Government no longer allocates fuel and has a much lesser need to predict completion dates accurately. Thus, the provision is no longer needed to serve the purpose for which it was adopted.

Although the requirement for the specification of the earliest and latest construction completion dates is deleted, the Commission will still issue a construction permit or a combined construction permit/operating license for a fixed period not to exceed forty years pursuant to sections 103(c) and 183 of this Act. The legislation would also provide specifically for an opportunity for a public hearing. This is consistent with section 189 as it is proposed to be amended by section 102 of the bill to delete the current requirement that hearings be held on construction permits for certain large facilities even in the absence of a hearing request.

In addition, consistent with present regulatory practice, an application to modify a production or utilization facility will require a construction permit only if the modification is defined as a material alteration of that facility pursuant to 10 CFR § 50.91.

Subsection b. of section 185 as it would be amended permits issuance of what would be called a combined construction permit and operating license (CP/OL) for a thermal neutron power generation facility. This definition would include all currently licensed U.S. commercial nuclear power reactors (including all currently licensed U.S. gas-cooled reactors), but exclude facilities such as breeder reactors and fuel reprocessing plants. A combined CP/OL could be issued for thermal neutron power generation facilities only if the application contains sufficient information to support the issuance of both the construction permit and operating license. In short, the application must include an essentially complete design. After issuance of the CP/OL and prior to commencement of operation (fuel loading), the Commission must find that the facility has been constructed and will operate in conformity with the CP/OL, the requirements of the Commission implementing this Act, and the National Environmental Policy Act of 1969 (NEPA). An opportunity for public hearing will be provided prior to the issuance of the CP/OL and prior to the commencement of operation as prescribed in section 189 of this Act. In addition, prior to commencement of operation the Commission will conduct a supplemental review of any safety and environmental issues that are required to be considered and were not considered in any prior review of that facility, facility site, or design approval for that facility. The preoperational review would be documented and result in the issuance of an operation authorization that would be considered a license for purposes of post-operational inspection and enforcement, for purposes of fixing the period of the operating license pursuant to sections 103(c) and 183 of this Act, and for purposes of judicial review under section 189e.

Subsection c. of section 185 as it would be amended authorizes the Commission to rely upon a certification of need for the facility and the results of the consideration regarding alternative sources of generating capacity that are made by competent Federal, state or regional governmental entities upon an appropriate verification by the certifying organization. This subsection has been added to eliminate a duplicate review by the Commission of these environmental findings which are needed to support licensing decisions under applicable provisions of Federal law, and which have been made by other appropriate governmental organizations. If a proper certification is made, it shall be conclusive for determining compliance with applicable Federal law, and the findings shall not be reviewable in a Commission proceeding or in Federal Court involving its review of a Commission decision. The bill would not affect judicial review of a Federal agency's certification pursuant to laws other than the Atomic Energy Act; however, no additional rights to judicial review of Federal agency certifications are intended to be created.

Determinations regarding alternative energy sources made by governmental organizations cannot preempt the Commission's regulatory authority over radiological hazards. Accordingly, a state could not substitute its judgment for that of the Commission regarding the radiological hazards of a nuclear facility in determining a preference for energy options. The Commission will develop and provide to the states its assessment of the radiological hazards of the nuclear alternative which could then be used by the states in their respective considerations of energy alternatives.

Subsection d. has been added to ensure that the Commission shall not commence a proceeding to modify a final determination made in any prior proceeding involving a particular facility, facility site, or design approval for that facility, unless there is a substantial reason to do so.

For purposes of this subsection, a final Commission determination, for which no hearing was requested or needed, would be accorded the same weight and effect as a prior final Commission determination made after a hearing. The person or entity requesting the modification must make a substantial evidentiary showing, as defined in section 201 of the Act, in accordance with procedures to be established by the Commission that the modification is required to comply with Commission requirements relating to this Act or other pertinent Federal laws. The bill defines a substantial evidentiary showing, for purposes of this section, subsections 193f. and 194e., to be a showing of evidence by the proponent of the modification that is sufficient to justify the conclusion that the proposed modification of the previous NRC final determination is required to comply with the Atomic Energy Act of 1954, other providions of Federal law or the Commission's regulations. The bill also specifies that, in reaching its conclusion on the sufficiency of the proponent's evidentiary showing, the Commission will consider only the evidence presented by the proponent of the proposed modification as well as any reasonable inferences that can be drawn from that evidence. However, any party can present, and the Commission can consider, argument concerning the sufficiency of that evidence. For purposes of this subsection, a proponent would include the NRC staff. This requirement for a threshold evidentiary showing imposes the burden on the proponent of a proposed modification to a final Commission determination to present at the outset sufficient facts, reasoning and supporting technical analysis to demonstrate that there is a substantial basis for believing that the proposed modification is needed to comply with the Atomic Energy Act, other Federal law or the Commission's regulations. In determining the sufficiency of an evidentiary showing under this section, the Commission is not expected to conduct a detailed review of the merits of each element of the proponent's case, such as would normally occur after the submission of evidence from parties favoring and opposing a proposed modification in a Commission licensing proceeding. However, the Commission, in assessing the sufficiency of the proponent's threshold evidentiary showing, may take official notice of any fact of which a court of the United States may take judicial notice and may apply its technical judgment based upon technical or scientific facts within the knowledge of the Commission as an expert body. For purposes of this subsection, and subsections 189a.(1)(D), 193f. and 194e. the term "Commission's regulations" is intended to refer to those regulations of the Commission in effect at the time the modification is proposed. This subsection is intended to limit NRC initiated changes after a final Commission decision. It is not, however, intended to limit the ability of the NRC staff to question whether such changes should be made or to restrict staff effort in examining proposed changes.

Under current law, after a proceeding to modify a license is commenced by issuance of an order under 10 CFR 2.204, the proponent of the modification has the burden of going forward to make a prima facie case. The evidentiary burden imposed by this subsection and counterpart subsections 193f. and 194e. is similar, but would apply at an earlier phase before a formal order commencing a proceeding can be issued. The requirement in these subsections would not affect the Commission's or the NRC staff's authority to seek and obtain information from licensees about public health and safety problems. Indeed, it is quite possible that licensee-supplied information would be the basis for satisfaction of the evidentiary burden requirement. Subsection 185e would provide that nothing in section 185 affects state authority over radiation hazards. Thus, this Act would not create any new state authority over radiation hazards.

Section 102. Hearings and Judicial Review.

This section amends section 189 of the Atomic Energy Act of 1954. Section 189 affords members of the public the opportunity to request and participate in hearings on proposed licensing actions relating to specific nuclear facilities and activities.

The amendments to section 189 eliminate the present requirement for a mandatory hearing, even if no hearing is requested by a member of the public, for the issuance of a construction permit for commercial production and utilization facilities or testing facilities. The Commission would still be required to afford an opportunity for hearing and would hold a hearing at the request of any person whose interest may be affected. This change reflects the judgment as provided in section 2(a)(11) of the bill that adjudicatory hearings should not be held where there are no material issues of fact placed in dispute. This section also would permit the Commission at its discretion to use hybrid-type hearing procedures, as specified in subsections c. and d., instead of the formal adjudicatory procedures which have been used in the past.

Subsections 189a.(1)(A)-(C) would require that prior notice of various kinds be given and opportunity for public hearing afforded at key points in the licensing process for site approvals, design approvals, construction permits, operating licenses, combined CP/OLs and preoperational reviews for plants which have been previously issued a combined CP/OL. These provisions do not apply to materials and export licenses. They are covered by existing law.

Subsection 189a.(1)(B) requires that special notice by publication in major newspapers having national circulation be given on the receipt and prior to the granting of an application for the approval of a facility design under section 194. Members of the public throughout the nation may wish to participate in public proceedings on design approval requests and this is a special mechanism for providing them with appropriate notice. Design approvals may be applied to any appropriate facility site location throughout the country and, hence, broad public notice should be provided for the design approval request.

Subsection 189a(1)(C) requires the Commission to offer a hearing prior to operation of a facility for which a combined CP/OL has been granted. The types of issues that can be raised are specified in subsection 189(1)(D).

Subsection 189a.(1)(D) would limit hearings to matters that were not and could not have been considered and decided in prior proceedings involving that facility, facility site, or approval of a design for that facility under section 194. This subsection would preclude adjudication of a matter that had been previously litigated unless there has been a substantial evidentiary showing that the issue should be reconsidered based on significant new information which came to light after the prior proceeding. This subsection would also preclude adjudication of a matter that had not been previously litigated, but could have. However, such an issue would be acceptable if the proponent makes a substantial evidentiary showing that significant new information has been developed since the prior proceeding and therefore the facility is likely not to meet requirements. An issue which could not have been raised in a previous proceeding would be an appropriate issue for consideration in a subsequent adjudicatory hearing if it otherwise meets the requirements of this section. For the purposes of subparagraph (D), the bill defines a substantial evidentiary showing as one sufficient to justify the conclusion that the facility will no longer comply with the Atomic Energy Act, other Federal law or the Commission's regulations (see discussion, P.6).

The provisions restricting modifications to specified final NRC decisions in revised sections 185d., 193f., and 194e. differ from the related provisions restricting relitigation of issues in revised section 189a.(1)(D). The first three are primarily intended to control the NRC's requiring modifications. The last is aimed at requiring intervenors to meet a reasonableness criterion. Both provide similar relief from the restriction if the proponent makes a defined substantial evidentiary showing in accordance with Commission procedures. However, sections 185d., 193f., and 194e. provide generally for a substantial evidentiary showing of non-compliance with regulatory requirements, while section 189a.(1)(D) provides more narrowly for a substantial evidentiary showing of non-compliance with requirements based on new information. Moreover, the first three sections listed only restrict Commission modifications of matters that have been both considered and finally decided in the prior proceeding. The section 189 provision restricts relitigating matters that either were or could have been considered and finally decided in the prior proceeding. The former provisions allow more leeway than the section 189 provisions because the former are intended for use in the formal licensing review and enforcement process. They are directed primarily at NRC staff proposed changes, although requests for enforcement action by members of the public under 10 CFR 2.206 of NRC's regulations would also be covered. Section 189a.(1)(D), on the other hand, applies only in the hearing process for agency adjudications. Here a more stringent limitation was considered appropriate in view of the fact that the hearing process is a more time consuming and expensive method of resolving disputes than the informal NRC staff review.

Subsection 189a.(2) is identical to the so-called "Sholly Amendment" language enacted by the Congress in Public Law

97-415 on January 4, 1983, except that the concept would be extended to include amendments to construction permits, CP/OLs, design approvals, and site permits.

Subsection 189b. substantially modifies the existing statute by giving the Commission discretion to use hybrid-type hearing procedures. Historically the hearing phase of the proceedings to license production and utilization facilities has been entirely on-the-record adjudicatory proceedings (*i.e.*, formal, trial-type hearings) with no flexibility to substitute informal procedures. Studies of regulatory reform in administrative proceedings have suggested in recent years the use of hybrid-type hearings as a technique to introduce permissible informality while preserving formal adjudicatory procedures for the resolution of relevant facts which are in dispute. In addition, on January 7, 1983, Congress enacted the "Nuclear Waste Policy Act of 1982," which includes a provision for hybrid hearing procedures for any hearings required on an application for reactor spent fuel storage expansion. Furthermore, the Commission has had some limited experience with hybrid hearing procedures in certain rulemaking proceedings. Thus, although hybrid hearing procedures have not been used in the licensing of nuclear power reactors and other production and utilization facilities, the format is not a novel one. Indeed its feature of using informal proceedings to identify any issues which must be adjudicated is not unlike the objectives of the prehearing procedures provided for in the Commission's Rules of Practice.

Generally, the purpose of the hybrid procedures established in subsections 189c. and d. and described below is to define with precision the issues, if any, that are in controversy and which must be resolved through formal adjudication. Discovery remains an essential part of this process, and discovery opportunities provided for in the Commission's regulations would be available to all parties.

Subsection 189c. would permit the Commission to use hybrid procedures in any hearing on an application for the granting, renewing or amending of a construction permit, operating license, combined construction permit and operating license, site permit, or approval of a design under section 194, after providing the parties to the proceeding with an opportunity to present their views. The Commission shall at the request of any party provide an opportunity for oral argument with respect to any matter which the Commission determines to be in controversy among the parties. The oral argument is to be preceded by such discovery procedures as the rules of the Commission shall provide, and each party, including the NRC staff, shall be required to submit to the Commission, in written form, at the time of the oral argument, a summary of the facts, data and arguments upon which such party proposes to rely that are at that time known to the party.

Subsection 189d. provides the procedures for determining the issues, if any, which must be adjudicated in formal proceedings. The subsection requires the Commission to designate any disputed question of fact for resolution in an adjudicatory hearing only if it determines that: there is a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of reliable and specifically identified evidence in an adjudicatory hearing; and the decision of the Commission is likely to depend in whole or in part on the resolution of such dispute. The procedures in subsection 189d. for determining issues that must be adjudicated in formal proceedings are similar to the Commission's procedures for summary disposition in that the Commission must consider and weigh the evidence submitted by all parties on the issue to determine whether there exists a genuine dispute of material fact. However, subsection 189d. adds three requirements not found in the Commission's summary disposition procedures (10 CFR section 2.749). First, subsection 189d. requires an affirmative Commission determination as a precondition to holding a formal hearing on an issue. Under the Commission's present procedures, a formal hearing is provided unless a party requests summary disposition and the Commission finds that the requirements for summary disposition have been met. Second, subsection 189d. requires a finding by the Commission that the preponderance of the evidence submitted indicates that the genuine dispute of material fact is also substantial -- that is, that the issue is likely to be significant to the outcome of the proceeding. No such finding is required by the Commission's summary disposition procedures. Third, subsection 189d. requires a finding by the Commission that the preponderance of the evidence submitted indicates that a formal adjudicatory hearing is needed to resolve the issue. Again, no such finding is required by the Commission's summary disposition procedures. After applying the criteria in subsection 189d., the Commission must designate in writing why the ultimate decision is likely to depend on the resolution of the specific dispute and why an adjudicatory hearing is necessary to resolve the dispute. In making its decision, the Commission may take official notice of any fact of which a court of the United States may take judicial notice or of any technical or scientific fact within the knowledge of the Commission as an expert body.

Subsection 189e. maintains with only a conforming change the current provision for the judicial review of final orders of the Commission in any proceeding of the kind specified in Section 189.

Section 103. Early Site Approval.

This is a new section 193 to the Atomic Energy Act which authorizes the NRC to approve one or more sites for the location of production or utilization facilities prior to the filing of any application to construct and/or operate a facility on that site. The purpose of this provision is to permit the resolution of site-specific questions at an early stage in the licensing process. Public participation on this crucial aspect of the overall facility planning and construction process would also occur at an early point in time where such participation can be most effective. This provision is an integral part of the effort to promote the early, effective and efficient resolution of issues in the licensing process.

Subsection a. of section 193 provides that an application for early site approval may be filed by any person or entity and that the Commission is authorized to issue a site permit for a period of ten years even though no application for a construction permit or a combined CP/OL has been filed. It would also authorize limited aspects of the site (e.g. seismicity) to be considered and resolved prior to the filing of any application for a construction permit or combined CP/OL. This subsection permits an early and specific focus on the suitability of a site for production or utilization facility construction without requiring the development of a facility design. A site permit issued under this section would be a final Commission order subject to judicial review.

Subsection b. of section 193 provides that notwithstanding section 161w. of this Act or the Independent Offices Appropriation Act of 1952, no application filing or issuance fees shall be required for an application for approval or for an amendment or renewal of a site permit. The Commission is authorized to allocate the costs ordinarily defrayed by fees collected among future applicants for permits or licenses which propose to use the site permit. This provision is added as an incentive to applicants to seek approval for site permits. However, if fees cannot be defrayed because a site is not used during the initial ten year approval, the holder of the site permit must pay the full amount notwithstanding the granting of a renewal.

Subsection c. of section 193 authorizes the Commission to approve an application and issue a site permit with appropriate conditions if, after considering all the information in the application and providing an opportunity for a public hearing, the Commission determines that such approval will not be inimical to the common defense and security or to the health and safety of the public. An opportunity for a prior public hearing on the application will be afforded under Section 189 of the Act. It is currently envisioned that for full site permits the application would set forth an envelope of parameters such as: (1) the number, type or types and thermal power level of the facilities with respect to which the application for site approval is made; (2) the site description and location, including site boundaries and exclusion area; (3) description of nearby industrial, military, and transportation facilities, including usage and routes; (4) the proposed maximum levels of radiological and thermal effluents that each such facility will produce; (5) the type or types of cooling systems, intake and outflow, that may be employed by each facility; (6) the physical characteristics of the site, including seismic, meteorological, hydrologic, and geologic characteristics as well as population density and use characteristics of the surrounding area; and (7) such other information as the Commission may by rule or order require. By describing the site in such a way, the Commission could determine the site suitability for one or several generic designs that may be developed pursuant to section 194, the provision for standardized facility designs. However, nothing in this section would preclude the Commission from promulgating regulations which set forth standards and criteria for site approval consistent with section 161(i) of this Act and section 553 of title 5 of the United States Code.

Subsection d.(1) of section 193 provides that a site permit can be referenced in an application for a facility to be constructed on the site if the application has been filed within the period during which the site permit remains valid. The effect of this provision is that matters resolved in a site permit review or licensing action will not be modified or reexamined as part of the review of a construction permit or a combined CP/OL application which references the site permit, unless a substantial evidentiary showing is made pursuant to subsection f. After a site permit has been referenced, a request for renewal would be unnecessary to continue the effectiveness of the site permit for the application referencing the approved site.

Subsection d.(2) of section 193 authorizes the Commission to renew a site permit for not less than five or more than ten years from the date of renewal. Renewal would be based only upon the application of a permit holder. The minimum period of five years is set to assure that the resources used to review a renewal request are directed toward meaningful results. For example, allowing repeated renewals for only six months or a year could cumulatively tax the resources of the agency and industry alike. Moreover, it is contemplated that information necessary to form a sound basis for the decision to renew for periods of five to ten years will be readily available and within the state-of-the-art. Renewals would be based on regulations in effect at the time the renewal is requested providing a means to update the earlier approval. Subsequent renewals of the site permit will not be entertained, although the permit holder may submit a new application for the same site.

Subsection d.(2) of section 193 also sets out the criteria the Commission shall apply in deciding whether to renew a site permit. The Commission shall renew the site permit if it finds that the site will comply with this Act or NRC regulations in effect at the time of site permit renewal. Any licensing fees resulting from the granting of a renewal may be defrayed and allocated among future applicants using the renewed site permit. Defrayed renewal fees must be collected at the end of the renewal period.

Subsection e. of section 193 assures that a site approved under this section may be used for an alternative type of energy facility or any other purpose. However, the validity of the site permit for production or utilization facility siting may be affected by use of the site for a purpose not considered in its approval. The Commission intends to promulgate regulations which would require proper notice be given to the Commission regarding a nonconforming use.

Subsection f. of section 193 specifies that the Commission shall not commence a proceeding to modify any previous final determination involving a site permit unless a substantial evidentiary showing is made in accordance with procedures established by the Commission that the proposed modification is necessary to comply with Commission requirements and other applicable provisions of Federal law. This provision is intended to have the same effect as the counterpart provisions in subsection 185d. and the discussion in the section-by-section analysis of that subsection is applicable here as well.

This provision would not preclude a holder of a site permit from seeking an amendment to that permit. The Commission shall approve an amendment to a site permit issued under this section if, after providing an opportunity for hearing pursuant to section 189 of this Act, the Commission determines that the amendment will comply with this Act and the Commission's regulation. Any amendment approved would apply to any construction permit or combined CP/OL utilizing the site permit after the amendment becomes effective.

Section 104. Approval of Designs.

This is a new section 194 to the Atomic Energy Act of 1954, which provides for approval of thermal neutron power generation facility designs. As with early site approvals, this section is intended to facilitate early resolution of issues with full opportunity for participation by interested persons. Although the Commission currently has procedures for approving designs, this section gives explicit statutory support to the concept and establishes requirements for Commission approval of facility designs. This section will encourage the development and use of standardized designs, will enhance safety, and will contribute to a better utilization of NRC resources.

The facility design should be described in such a way as to provide an envelope of parameters for sites selected pursuant to section 193 to assure that the plant could be constructed on a site of given general characteristics. Typically, a facility design should be described in such a manner that it could be used at more than one site with a minimum of adaptations because of specific site characteristics. The Commission contemplates and encourages development and use of substantially complete standardized designs as an effective means of increasing agency efficiency and augmenting the public health and safety.

The application requirements for approval of a facility design will be set out in the Commission's rules. If, after Commission review of the information in the application, and after providing the opportunity for a public hearing under Section 189 of the Act, the Commission determines that the design is suitable for construction and operation, it will issue an approval and the design may be banked for future use. An approval issued under this section will be considered a final Commission order subject to judicial review. When a pre-approved design is combined with a pre-approved site, it is contemplated that there may be a hearing with respect to the relevant construction permit or CP/OL if there are outstanding issues, _i.e._, issues raised by the matching of the site with the design. However, issues which were or could have been decided would not trigger new opportunities for hearing at the time the site and design are matched unless a substantial evidentiary showing is made that reconsideration of site or design issues is necessary to ensure compliance with this Act, other provisions of Federal law, or the Commission's regulations.

Subsection a. of section 194 authorizes the Commission to approve facility designs or the design of any major subsystem for a period of ten years even though no application for a construction permit or combined construction permit and operating license has been filed by an applicant. This provision permits design applications and approvals to be made before initiation of construction of thermal neutron power generation facilities.

Subsection b. of section 194 provides that notwithstanding section 161w. of this Act or the Independent Offices Appropriation Act of 1952, no application filing or issuance fees shall be required for an application for approval or for an amendment or renewal of an approval of a standardized facility. The Commission is authorized to allocate the costs ordinarily defrayed by fees collected among future applicants for permits or licenses which propose to use the approved design. This provision is added as an incentive to vendors and architect-engineer firms to develop and seek approval for standardized designs. However, if fees cannot be defrayed because a design is not used during the initial ten year approval, the applicant must pay the full amount notwithstanding the granting of a renewal.

Subsection c. of section 194 authorizes the Commission to approve an application and issue a design approval with appropriate conditions if, after considering all the information in the application and providing an opportunity for a public hearing, the Commission determines that such approval will not be inimical to the common defense and security or to the health and safety of the public. The opportunity for hearing and the hearing, if held, would be in accordance with section 189 of the Act.

Subsection d.(1) of section 194 provides that a design approval can be referenced for a facility if an application has been filed within the period during which the design approval remains valid. The effect of this provision is that all matters resolved in a design approval review or licensing action, including amendments to that approval, can be transferred without a need to re-review those matters in all applications for a construction permit, combined CP/OL, or operating license which reference that design approval, unless a substantial evidentiary showing is made pursuant to subsection e. A request for renewal would not be necessary to continue the effectiveness of the design approval in these referenced applications.

Subsection d.(2) of section 194 authorizes the Commission to renew a design approval for not less than five or more than ten years from the date of renewal. Renewal would be based upon the application of a permit holder. The minimum period of five years is set to assure that the resources used to review renewal requests are directed toward meaningful results. For example, allowing renewals for only six months or a year could cumulatively tax the resources of the agency and industry alike. Moreover, it is contemplated that information necessary to form a sound basis for the decision to renew for periods of five to ten years will be readily available and well within the state-of-the-art. It also sets out the criteria the Commission shall apply in deciding whether to renew a design approval. Renewal shall be granted unless it can be demonstrated that the design will not comply with the Atomic Energy Act or the Commission's applicable regulations in existence at the time that renewal is requested. This provision allows for updating designs at the time a request for renewal of an approval is made. Subsequent renewals of the design approval will not be entertained, although the design approval holder may submit a new application for the same design. Any licensing fees resulting from the granting of a renewal may be defrayed and allocated among future applicants using the renewed design approval. Defrayed fees must be collected at the end of the renewal period.

Subsection e. of section 194 specifies that the Commission shall not commence a proceeding to modify a final determination made in a design approval proceeding unless a substantial evidentiary showing has been made in accordance with procedures to be established by the Commission. This subsection is intended to have the same effect as the counterpart provision in subsections 185d. and 193f., and the section-by-section analysis of these subsections is applicable here as well.

Subsection f. of section 194 sets forth the criteria by which the Commission will approve an amendment to a design approval and how that amendment shall be applied to facilities which reference the design. These provisions ensure that approved amendments will apply to applications for a construction permit or a combined CP/OL referencing the design approval that are filed after the effective date of the amendment. The amendment, however, will not apply to those applications referencing the design which are filed before the effective date of the amendment unless (1) the applicant requests that the amendment be applicable, or (2) the reopening standards of subsection 194e. are satisfied.

Subsection g. of section 194 provides that any facility permit or license which references a design approval may be granted a variance from the design approval if the Commission determines that the variance will comply with this Act and the Commission's regulations.

A variance granted by the Commission under this subsection will apply only to the facility for which the variance has been requested. Thus, the variance does not apply to other facilities referencing the standardized design approval and does not constitute an amendment to the design approval. The purpose of this provision is to allow a facility-specific deviation from the referenced standardized design if the Commission finds that the deviation from the design will comply with the Atomic Energy Act and the Commission's regulations. Design issues raised by a request for a variance may be considered in a hearing on the application for a license, permit, or an amendment which includes the variance in accordance with subparagraph (D) of section 189a.(1) of the Atomic Energy Act.

Title II -- Miscellaneous Provisions

The provisions contained in section 201 of the bill would add new subsections bb. and cc. to Section 11 of the Act. Section 11bb., as amended, would define a "substantial evidentiary showing" as used in subsections 185d. 189a.(1)(D), 193f., and 194e. of the Act. Section 11cc., as amended, would define "thermal nuclear generation facility" as used in sections 185 and 194 of the Act.

The provisions contained in section 203a. of the bill requires the Commission to propose regulations to implement the provisions of sections 185d., 193f. and 194e. applicable to thermal neutron power generation facilities within 180 days following the effective date of this section.

The provisions of section 203b. of the bill would prohibit the modification of any thermal neutron power generation facility except pursuant to the regulations promulgated under subsection a., once these regulations are promulgated.

Subsection c. of section 203 of the bill assures that an appropriate environmental review will be conducted and an impact statement prepared for any full site approval under section 193 of the Act. However, since need for power and alternative energy source issues probably cannot be assessed in the absence of a specific application for a facility, environmental reviews of these issues would not need to be done at the site approval stage. In addition, an environmental impact statement may not be appropriate and would not be required if the site is reviewed for a limited aspect. Such environmental considerations not assessed in the prior site reviews would be assessed in subsequent reviews of the facility to be located at the site. It is the intent of the Commission, however, to complete the full NEPA environmental review at the earliest possible stage in the approval of a site and a facility.

Subsection d. of section 203 of the bill would establish that no environmental review is required for the issuance of a design approval under section 194 of the Act. Any environmental review of a design would be conducted in connection with the application for a site permit, or an application for a construction permit or a combined CP/OL.

Title III -- Conforming Amendments

These provisions would be necessary to conform other sections of the Atomic Energy Act of 1954 with the provisions contained in this bill. Section 182b. of the Act would also be changed to provide for Advisory Committee on Reactor Safeguards review prior to commencement of operation in the case of a combined construction permit and operating license.

Title IV -- Effective Date

This provisions ensures that all sections of the Atomic Energy Act, including those sections amended by this bill, shall take effect as of the date of enactment and shall apply to all pending and new proceedings. The last phrase requires each proceeding to meet the terms of the Act in order to come under this Act. For example, for an application for a design approval already under review by the Commission to be treated under section 194, such an application will have to meet the requirements of both subsections 194a and 194c.

Comparison of NRC and DOE Licensing Reform Bills

Backfitting

NRC

Although the NRC bill does not mention backfitting specifically, Section 203.a. of Title II, Miscellaneous Provisions in the Draft Bill, calls for the Commission to propose regulations establishing procedures and criteria for implementing the provisions of Sections 185.d., 193.f. and 194.e. of the Act and for the control of application of new requirements to any thermal neutron power generating facility licensed for construction for operation under the Act.

Sections 185.d., 193.f. and 194.e. preclude the Commission from modifying any final determination on an issue that has been considered and decided in any proceeding or the issuance of a permit or license for that facility, facility site or approval of design for that facility unless the proponent of the request makes a substantial evidentiary showing that such action is required to comply with the Act, other provisions of Federal law or the Commission's regulations.

DOE

Backfitting requirements are addressed in Section 29. a. In general, this section calls for centralized review by the Commission of all backfit requirements, describes the matters to be considered in a backfit analysis,* establishes a test or standard for review** of backfit requirements, precludes hearings or judicial review of backfit requirements, defines backfitting, limits the application of a backfit requirement by any person other than a holder of a permit, license or design approval until such time as the requirement is issued as an amendment to a permit, license or design approval or as a rule, regulation or order or amendment to the design approval, provides for exception to the backfit rule where emergency conditions exist and gives the Commission to apply backfit requirements to analyses and testing requirements proposed by Commission Staff.

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* Backfit analysis described:
1. Evaluation of the safety or security concerns;
2. Improvements in safety that would result;
3. Estimates of cost; and
4. Other matters the Commission determines to be necessary.

** Test or Standards for Review:
1. Substantial enhancement of the public health and safety or common defense and security as a result of improved overall safety of facility operation;
2. Improvement in overall safety is justified when considered over the remaining life of the facility.

COMBINED CONSTRUCTION PERMITS AND OPERATING LICENSES

BOTH THE NRC AND DOE BILLS AMEND SECTION 185 OF THE ATOMIC ENERGY ACT TO PERMIT THE ISSUANCE OF A COMBINED CONSTRUCTION PERMIT AND OPERATING LICENSE. SOME OF THE DIFFERENCES IN APPROACH ARE NOTED BELOW.

NRC

1. THE USE OF THE COMBINED CONSTRUCTION PERMIT AND OPERATING LICENSE (CP/OL) IS LIMITED TO THERMAL NEUTRON POWER GENERATING FACILITIES. THE SIGNIFICANCE OF USING THIS TERM IS THAT APPLICANTS FOR BREEDER REACTORS AND NEW TECHNOLOGIES OTHER THAN THOSE WHICH RELIED UPON THERMAL NEUTRON FISSION AS A POWER GENERATING SOURCE WOULD NOT BE PERMITTED TO USE THE COMBINED CP/OL APPROACH. APPLICANTS FOR REPROCESSING PLANTS WOULD ALSO BE PROHIBITED FROM USING THE CP/OL FORMAT.
2. PRIOR TO COMMENCEMENT OF OPERATION, THE COMMISSION IS REQUIRED TO PUBLISH A NOTICE OF INTENDED OPERATION, MUST FIND THAT THE FACILITY HAS BEEN CONSTRUCTED AND WILL OPERATE IN CONFORMITY WITH THE CP/OL, THE PROVISIONS OF THE ACT AND THE REGULATIONS OF THE COMMISSION AND MUST PROVIDE AN OPPORTUNITY FOR PUBLIC HEARING PURSUANT TO SECTION 189 OF THE ACT.
3. THE NEED FOR THE FACILITY AND OF THE ALTERNATE SOURCES OF GENERATING CAPACITY SHALL BE RELIED UPON WHEN CERTIFIED BY A FEDERAL, REGIONAL OR STATE ORGANIZATION THAT IS AUTHORIZED BY LAW TO DO SO PROVIDED SUCH ORGANIZATION MEETS CRITERIA OUTLINED IN SECTION 185.C. THE VALIDITY OF THE CERTIFICATION WILL BE CONCLUSIVE AND NOT SUBJECT TO FEDERAL JUDICIAL REVIEW.
4. FINAL DETERMINATIONS MADE ON ISSUES DECIDED IN ANY PROCEEDING FOR ISSUANCE OF A PERMIT OR LICENSE SHALL NOT BE MODIFIED UNLESS A PROPONENT OF THE REQUEST MAKES A SUBSTANTIAL EVIDENTIARY SHOWING THAT SUCH ACTION IS REQUIRED TO COMPLY WITH THE ACT, OTHER PROVISIONS OF FEDERAL LAW OR THE COMMISSION'S REGULATIONS.
5. THERE ARE NO SPECIFIC PROVISIONS FOR LIMITED WORK AUTHORIZATIONS IN THE NRC BILL.

DOE

1. THE DOE BILL PERMITS THE ISSUANCE OF A COMBINED CP/OL FOR A COMMERCIAL PRODUCTION OR UTILIZATION FACILITY. BY CONTRAST, THIS WOULD PERMIT THE ISSUANCE OF A CP/OL FOR A BREEDER REACTOR, REPROCESSING PLANT OR NEW TECHNOLOGIES WHICH MAY DEVELOP IN THE FUTURE.
2. PRIOR TO OPERATION, THE DOE APPROACH WOULD RELY UPON CERTIFICATION BY THE HOLDER OF THE CP/OL THAT THE FACILITY HAS BEEN CONSTRUCTED AND WILL OPERATE IN CONFORMITY WITH THE COMBINED CP/OL PROVISIONS OF THE ACT AND THE RULES AND REGULATIONS OF THE COMMISSION. PUBLIC NOTICE OF THE CERTIFICATION IS REQUIRED BUT THE OPPORTUNITY FOR PUBLIC HEARINGS IS NOT.
3. SECTION 185.B. OF THE DOE BILL PERMITS CERTIFICATION OF THE NEED FOR POWER TO THE COMMISSION BY A STATE, POLITICAL SUBDIVISION OR PUBLIC ENTITY REQUIRED BY LAW TO MAKE A DETERMINATION CONCERNING THAT NEED.
4. THE DOE BILL HAS NO PROVISIONS UNDER SECTION 185 FOR RELITIGATION OF ISSUES.
5. SPECIFIC STATUTORY AUTHORITY IS GIVEN TO PERMIT THE COMMISSION TO APPROVE LIMITED CONSTRUCTION INCLUDING SAFETY RELATED CONSTRUCTION PRIOR TO THE ISSUANCE OF THE CP OR CP/OL.

HEARINGS

NRC

1. MANDATORY CP HEARING IS ELIMINATED.
2. HYBRID HEARING PROCESS IS OPTIONAL.
3. PROVIDES FOR A POSSIBLE TWO-STEP LICENSING PROCESS. A SECOND HEARING IS PROVIDED PRIOR TO COMMENCEMENT OF OPERATION FOR THE FACILITY WITH A COMBINED CP/OL. THE SECOND HEARING IS LIMITED TO ISSUES THAT WERE NOT AND COULD NOT HAVE BEEN CONSIDERED AND DECIDED AT AN EARLIER STAGE.
4. PARTIES MAY BE ADMITTED IF THEY CAN DEMONSTRATE THAT THEY HAVE AN INTEREST WHICH MAY BE AFFECTED.
5. FOR RELITIGATION OF ISSUES, SEE NRC 4, COMBINED CONSTRUCTION PERMITS AND OPERATING LICENSES IN THIS ANALYSIS.

DOE

1. MANDATORY CP HEARING IS ELIMINATED.
2. A HYBRID HEARING PROCESS IS MANDATORY.
3. PROVIDES FOR A ONE-STEP LICENSING PROCESS. NO HEARING IS REQUIRED PRIOR TO THE COMMENCEMENT OF OPERATION FOR A FACILITY FOR A COMBINED CP/OL.
4. PARTIES MAY BE ADMITTED WHEN THEY DEMONSTRATE THAT THEY HAVE AN INTEREST WHICH MAY BE AFFECTED BUT MUST ALSO PRESENT A WRITTEN PETITION WHICH CONTAINS A REASONABLE SPECIFICITY AND BASIS FOR THE CONTENTION TO BE LITIGATED.
5. RELITIGATION OF ISSUES RAISED AND RESOLVED IN PRIOR PROCEEDINGS IS LIMITED TO THOSE WHERE SIGNIFICANT NEW INFORMATION HAS BEEN INTRODUCED AND ADMITTED WHICH RAISES A PRIMA FACIE SHOWING THAT ACTION IS NEEDED TO SUBSTANTIALLY ENHANCE PUBLIC HEALTH AND SAFETY OR COMMON DEFENSE AND SECURITY.

EARLY SITE PERMIT

NRC

1. THE DETAILS OF THE APPLICATION FOR SITE PERMIT ARE TO BE DETERMINED BY NRC REGULATION.
2. EARLY SITE WORK IS TO BE DETERMINED BY NRC REGULATIONS.
3. FILING AND ISSUANCE FEES MAY BE DEFERRED AND ALLOCATED AMONG APPLICANTS FOR PERMIT. IF NO APPLICATION IS MADE FOR A PERMIT WITHIN A TEN YEAR PERIOD, THE HOLDER OF THE PERMIT MUST PAY THE FEE. SITE PERMITS ARE RENEWABLE FOR PERIODS OF NOT LESS THAN FIVE, NOR MORE THAN TEN YEARS.
4. AN APPROVED SITE MAY BE USED FOR AN ALTERNATE OR MODIFIED TYPE OF ENERGY FACILITY, HOWEVER, OTHER USES MAY AFFECT THE VALIDITY OF THE SITE PERMIT FOR PRODUCTION OR UTILIZATION FACILITY SITING PURPOSES.
5. THE BILL IS SILENT ON THE QUESTION OF WHETHER A SITE PERMIT IS A MAJOR FEDERAL ACTION FOR THE PURPOSES OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969.

DOE

1. THE SPECIFIC DETAILS TO BE INCLUDED IN THE APPLICATION FOR AN EARLY SITE PERMIT ARE INCLUDED IN THE LEGISLATION.
2. PERMITS FOR EARLY SITE WORK INCLUDING SAFETY RELATED CONSTRUCTION PRIOR TO ISSUANCE OF A CP OR CP/OL.
3. A DEFERRAL OF FEES IS NOT MENTIONED.
4. RENEWAL OF SITE PERMITS IS PERMITTED FOR TEN YEAR PERIODS.
5. ALTERNATE USES FOR AN APPROVED SITE IS PERMITTED.
6. ISSUANCE OF A SITE PERMIT IS SPECIFIED TO BE A MAJOR FEDERAL ACTION WITHIN THE MEANING OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969.

APPROVAL OF DESIGNS

NRC	DOE
1. DESIGN APPROVAL ARE LIMITED TO THERMAL NEUTRON POWER GENERATION FACILITIES. 2. RENEWALS ARE PERMITTED FOR NOT LESS THAN FIVE, NOR MORE THAN TEN YEARS AT THE DISCRETION OF THE COMMISSION. 3. REQUIRES AN OPPORTUNITY FOR A HEARING PURSUANT TO SECTION 189 OF THE ACT. 4. THE FEES MAY BE DEFERRED TO BE ALLOCATED AMONG APPLICANTS. IF NO APPLICATION IS MADE WITHIN A TEN YEAR PERIOD, THE HOLDER OF THE PERMIT IS RESPONSIBLE FOR THE FEE. 5. VARIANCES FROM CONSTRUCTION PERMITS, OPERATING LICENSES FOR COMBINED CP/OLs ARE PERMITTED IF THE COMMISSION DETERMINES THAT THE VARIANCE WILL COMPLY WITH THIS ACT AND THE COMMISSION'S REGULATIONS.	1. DESIGN APPROVALS ARE PERMITTED FOR PRODUCTION AND UTILIZATION FACILITIES. 2. RENEWAL OF DESIGN APPROVALS ARE FOR TEN YEAR PERIODS ONLY. 3. PERMITS THE USE OF RULEMAKING TO APPROVE DESIGNS. 4. PERMITS THE DEFERRAL OF FEES UNTIL APPLICATIONS FOR USE OF THE DESIGN ARE MADE. 5. DOES NOT MENTION VARIANCES IN THIS SECTION ALTHOUGH THE SAME GENERAL PURPOSE IS ACCOMPLISHED IN SECTION 195 WHICH FOLLOWS.

ACRS REVIEW

NRC	DOE
MANDATORY ACRS REVIEW OF ALL LICENSE APPLICATIONS IS MAINTAINED AND MANDATORY REVIEW FOR DESIGN APPROVAL IS ADDED. REVIEW OF AMENDMENTS TO OR RENEWALS OF SITE PERMITS AND DESIGN APPROVALS IS ONLY REQUIRED IF REFERRED BY THE COMMISSION.	ACRS REVIEW IS DISCRETIONARY EXCEPT WHERE APPLICATIONS ARE REFERRED TO IT BY THE COMMISSION.

SAFETY GOALS

NRC	DOE
SAFETY GOALS ARE NOT SPECIFICALLY MENTIONED IN THE NRC LEGISLATIVE PROPOSAL.	LEGISLATION REQUIRES DEVELOPMENT OF A SAFETY GOAL AND A REPORT ON DEVELOPMENT OF THAT SAFETY GOAL TO CONGRESS WITHIN A ONE YEAR PERIOD AFTER THE PASSAGE OF THE LEGISLATION.

PLANT STANDARDIZATION

QUESTION 10. Please comment on the importance of standardized plant design.

ANSWER.

Standardization can improve plant safety and plant economics. Construction times and costs could be reduced considerably. Standardization may also lead to better use of design, engineering and vendor resources. Standard programs of construction practice and quality assurance could be improved with repeated use. Moreover, experience gained at any standard plant would be relevant to the operating personnel, equipment and procedures of like standard nuclear power plants wherever they are located. That should lead to more effective maintenance of key safety components and improved operations.

STATUS OF CRBR LICENSING

QUESTION 11. What is the status of the licensing program for CRBR? When is the earliest date that a construction permit could be granted?

ANSWER.

On February 28, 1983, the Atomic Safety and Licensing Board issued a Partial Initial Decision ("PID") authorizing the issuance of a Limited Work Authorization ("LWA") for the Clinch River Breeder Reactor ("CRBR"). By Order of March 28, 1983, the Commission decided to conduct the effectiveness review of that decision without prior involvement by the Atomic Safety and Licensing Appeal Board ("Appeal Board"). Accordingly, the Commission has reviewed the PID and considered as comments, bearing on effectiveness, the motion for stay filed before the Appeal Board by the Natural Resources Defense Council, Inc. and Sierra Club and the answers thereto by the applicants and the NRC staff. On April 8, 1983, the Appeal Board denied that motion for stay. ALAB-721. The Commission agrees with that Appeal Board decision and based on its own review finds that there is no reason to stay the effectiveness of the PID. Commissioner Gilinsky abstains from this decision.*

The Safety Evaluation Report (SER) for the CRBR Construction Permit (CP) was issued by NRC staff in March of this year. Subsequently, the Advisory Committee on Reactor Safety (ACRS) meetings were held through April 14, 1983 and a letter was issued by that Committee on April 19, 1983 which stated that upon satisfactory resolution of identified safety concerns, "the CRBR can be constructed with reasonable assurance that it can be operated without undue risk to the health and safety of the public."

A supplement to the SER is scheduled to be issued by the staff on May 2, 1983. Hearings are scheduled to begin on July 19, 1983 and a decision on the CP is expected by June 30, 1984.

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* The views of Chairman Palladino and Commissioners Ahearne and Gilinsky follow.

SEPARATE STATEMENT OF CHAIRMAN PALLADINO

The separate views of Commissioner Gilinsky identify two points as "germane to the overall conduct of this proceeding." The first point concerns the NRC acceptance criteria for the CRBRP and the second point addresses the role of the NRC staff in the CRBRP licensing proceeding.

With regard to the first point, I do not believe that the Commission is in the dark about how the criteria are set or who approves them. The NRC staff briefed the Commission on the subject on December 9, 1981. More recently, the staff submitted an information paper to the Commission (SECY-83-47) on the development of Principal Design Criteria for CRBRP, the link between the General Design Criteria of Appendix A to Part 50 and the specific criteria used to judge the acceptability of the CRBRP design. We also received an ACRS report on April 19, 1983.

Furthermore, regarding Commissioner Gilinsky's statement that the criteria were defined in part through negotiation with the CRBRP applicant, the concern regarding NRC staff interaction with DOE was raised at the December 1981 briefing. The staff described an approach at the briefing that is consistent with NRC's approach for other unique projects. In my opinion, the staff exhibited sensitivity to the concern, justified its technical need to rely on the special expertise of DOE's national labs, and recognized the need to identify DOE people who are not involved in the CRBRP design.

As to the second point--the role of the NRC staff--the Commission's regulatory reform agenda includes the subject of modifying the staff's role in specific licensing actions. Pending before the Commission is a proposal that would remove the staff as a party under defined circumstances. However, it is argued that NRC adjudicatory boards rely heavily on the staff under the present system; concern has been expressed about a change in the staff's status. Thus, the issue is not solely one of public credibility. The Commission must and plans to address all of the implications of a change in the staff's role.

COMMISSIONER AHEARNE'S ADDITIONAL VIEWS

The basis for today's decision includes two actions with which I have disagreed:

(1) The March 28, 1983 order in which the Commission concluded that the Appeal Board should not be involved in the immediate effectiveness review. This was in spite of the regulation establishing the immediate effectiveness review process specifically including LWA's.

I dissented.

(2) The granting of a 50.12 exemption. The comments reviewed by the Commission in support of the PID relied on the Commission's 50.12 decisions, in particular as proof that the public interest requires expeditious completion of the CRBR. The Appeal Board (in ALAB-721) also relied on those decisions.

I dissented.

Consequently, for me today's decision is flawed. Nevertheless, given the Commission did exclude the Appeal Board, and did authorize the 50.12 exemption, then I agree that there is then no reason to stay the effectiveness of the PID. Consequently, I agree with the result but do not join the Commission on the basis. (It should be noted that the decisions today have no effect, because the applicants have decided not to request an LWA-2. The 50.12 exemption permits the applicants to continue work without an LWA-1.)

SEPARATE VIEWS OF COMMISSIONER GILINSKY
REVIEW OF CLINCH RIVER BREEDER REACTOR LWA-1 DECISION

The decision to authorize the issuance of a Limited Work Authorization 1 will have no effect on the activities which DOE is permitted to undertake at the reactor site. All the work which an LWA-1 would allow is already permitted under the exemption granted by the Commission on August 17, 1982.[1]

The Commission is going beyond the determinations it made in granting the exemption in one respect. The Commission is finding, in effect, that "core disruptive accidents", ones which involve melting of fuel, do not have to be considered in the licensing process at this stage. It is unclear whether the Clinch River site would be approved if such accidents did have to be considered.

The difficulty with the Commission's finding is that the issue of whether core disruptive accidents need to be considered in designing the plant has not been fully litigated in the hearing. While the Board thinks it does not need to face the issue at this stage, it will only venture that no one has shown that core disruptive accidents cannot be excluded from the design basis. But it also thinks that it will be very hard to show that such accidents can be excluded from the design basis:

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[1] I voted against DOE's request for an exemption when it was first presented to the Commission (CLI-82-4, March 16, 1982). I was not present when the Commission reconsidered this request (CLI-82-8, May 18, 1982 and CLI-82-23, August 17, 1982) but would have voted against the exemption had I been present; this would not have affected the outcome.

> The Board is not persuaded by the evidence of record to date -- nor at this juncture do we need to so find -- that the CRBR will be built and operated in a manner that precludes the necessity for considering CDAs within the design basis. It is our opinion, consistent with the preceding discussion, that Applicants, Staff and Intervenors have identified no threshold matters that would prevent attaining such an objective. However, we foresee a heavy burden upon these parties at the construction permit phase of evidentiary hearings to provide sufficient evidence to permit a resolution of this question.[2]

The Commission has rejected my proposal that it schedule a brief oral argument to clarify how core disruptive accidents should be treated at this stage. Without such further discussion there is no basis for finding that these accidents do not need to be considered now.

As a final matter, I would like to touch on two points which are not directly relevant to the LWA-1 decision but which are germane to the overall conduct of this proceeding. First, in view of the fact that the NRC staff is simultaneously reviewing the CRBR application and defining -- in part through negotiation with the applicant -- the criteria under which the application will be reviewed, I am troubled that no one at the Commission level seems to have any idea of how this process is working or even of who on the NRC staff approves the criteria.

Second, I am disturbed once again to see the NRC staff participating as a full party in a licensing proceeding battling arm-in-arm with the applicant against the intervenors. This involves the staff in a role which is fundamentally inconsistent -- both in terms of appearance and of substance -- with its role as an independent reviewer of the application. The difficulty is accentuated in this case by the fact that the CRBR project staff is simultaneously setting criteria and evaluating whether they are met. If the public is to have confidence in the outcome of this process, the NRC staff should withdraw as a party advocating a particular outcome in this case.

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[2] In the Matter of United States Department of Energy (Clinch River Breeder Reactor Plant), ___ NRC ___, Licensing Board decision March 2, 1983, p. 22.

CRBR FUNDING

QUESTION 12. How much is included in your FY 83 and FY 84 budget for CRBR licensing?

ANSWER.

The FY 1984 Budget Request included 39 FTEs and $9.9 million for FY 1983 and 22 FTEs and $8.2 million for FY 1984 for work related to the Clinch River Breeder Reactor.

LOFT PROGRAM

QUESTION 13 & 14. Why was the LOFT program transferred to the Energy Department?

Briefly explain the arrangement between DOE and foreign governments to continue the LOFT program. How will NRC be involved and how will the research results be used by NRC?

ANSWER.

The scheduled end of the NRC LOFT test series was February 1983 which would have resulted in the shutdown and decommissioning of the facility. In order to extend the useful life of the facility and maximize the benefits derived from the investment it represented, DOE canvassed the domestic and international nuclear community to determine to what degree support existed for continued operation. As a result, Austria, W. Germany, Finland, Italy, Japan, Spain (who has since dropped out), Sweden, Switzerland, the United Kingdom, and the Electric Power Research Institute (EPRI), expressed a willingness to form an International Consortium and to contribute to the LOFT Program which was to be coordinated by the Organization for Economic Cooperation and Development. NRC agreed to participate in the International Consortium, provided that its costs would not exceed $25 million, that the Consortium test program would include a large break loss of coolant test, (previously scheduled as the last test in the NRC test series), and that it would be relieved of further responsibility for the decontamination and decommissioning of LOFT. NRC estimated that its total costs for LOFT FY 1983 through FY 1987 would have been over $60 million if it continued to be responsible for the facility. DOE agreed to relieve NRC of further responsibilities for the reactor facility if NRC funded the first year (FY 1983) of LOFT at $25 million with no further contribution required.

Under the International Consortium, which has taken over the sponsorship of the LOFT test program, DOE is the operating agent. A three year test program has been drafted. The LOFT Management Board, with members from each participating country, will receive technical advice from a Program Review Group. The NRC funding contribution in FY 1983 provides for NRC continuing its participation in the consortium through FY 1985.

A test program involving eight tests in LOFT has been agreed upon. It consists of three large pipe breaks, two small break loss of coolant accidents, two fission product transport and deposition tests, and a loss of steam generator feedwater.

NRC expects to benefit primarily from the large break tests to help complete revisions to 10 CFR Part 50, Appendix K (Emergency Core Cooling System Evaluation Models). NRC will benefit from the small break tests, the loss of feedwater test and the fission product tests through use of the data to verify reactor safety analysis computer codes used in the licensing process.

RESEARCH PROGRAM

QUESTION 15. Your statement seems to indicate concern over reductions in the research program. You state "that we still have many technical safety issues to resolve." Can you briefly describe some of the more important unresolved safety issues?

ANSWER.

Our current Long Range Research Plan ~~which~~ details the major objectives of our research program and the reasons for them. Some of the more important safety issues are summarized below:

Severe Accidents

The issue is the realistic treatment of reactor accidents and fission product behavior. A significant research effort will be applied during the next few years to support the reassessment of the regulatory treatment of severe accidents, i.e., the loads on the containment resulting from the consequences of severe accidents, and the fission product release and transport. One of the objectives is a realistic treatment of fission product behavior within the reactor primary system and containment. Work on this issue includes studies of transients leading to fuel damage, the behavior of damaged fuel, fuel melt, fission product release and transport, and concepts for mitigating severe accidents.

Pressurized Thermal Shock

Embrittlement of reactor vessel welds, as a result of continued exposure to fast neutrons, make certain older PWR vessels more susceptible to failure during and after severe overcooling transients. The regulatory issues are: How serious is the problem at specific plants? What corrective actions are required and how soon? What are the acceptance criteria? This issue is called Unresolved Safety Issue A-49.

Risk Analysis

The issue is the introduction and continuing use of probabilistic risk assessment (PRA) as a decisionmaking tool in the licensing review process and in the regulatory review process. In the licensing review process, PRA is used to place in perspective new and recurring unresolved safety issues and generic safety issues. In the regulatory review process, PRA is used as part of the regulatory analysis accompanying changes in NRC regulations, guides, and standards and for setting reactor safety research priorities.

Human Factors

The issue is the application of human factors engineering in the design, operation, and maintenance of nuclear facilities. Included in this program is work on control room design and evaluation criteria, personnel qualification and staffing, management and organizational criteria, plant procedures, human reliability, and emergency preparedness.

Plant Aging

The issue is the regulation of operating nuclear power plants as they become older to ensure that they continue to meet health and safety requirements. The work is directed toward an understanding of the mechanisms of aging and degradation and toward methods for examining and testing to determine the condition of components. A significant part of this work is concerned with the effect of radiation-induced embrittlement on the structural integrity of reactor vessels in support of work on the pressurized thermal shock issue, steam generator tube integrity and the structural integrity of piping.

Equipment Qualification

The issue is to ensure that the methods for qualifying equipment for use in nuclear power plants take into account such factors as effects of synergism, order or sequence of tests, and accelerated aging techniques. Methods will be validated and new methods developed as appropriate to ensure that qualification test results reported by applicants and licensees provide a basis for licensing decisions that ensure protection of the public health and safety. The research includes environmental and dynamic qualification of electrical and mechanical equipment as part of an agencywide NRC effort on equipment qualification.

Thermal-Hydraulic Transients

The issue is improving and verifying the analytical methods needed to predict and understand primary and secondary coolant systems during all types of plant transients, including the full size range of pipe ruptures. The resulting analytical methods are used to quantify margins of Appendix K to 10 CFR Part 50, to assist the regulatory assessment of operator guidelines for accident prevention and mitigation, and to analyze complex plant system transients. The ability of computer codes to adequately predict systems test results provides increased confidence in the predictions made by the codes of full-sized plant behavior under similar conditions.

Waste Management

The Division of Waste Management is developing technical capability to assess compliance of a waste management system with the regulatory requirements for operational safety, occupational radiological protection, and long-term waste isolation and to assess risks associated with waste management operations and environmental impacts.

NUCLEAR WASTE POLICY ACT OF 1982

QUESTION 16. What new requirements are imposed on the NRC by the Nuclear Waste Policy Act of 1982?

ANSWER.

The new requirements that are imposed on the NRC by the Nuclear Waste Policy Act of 1982 are provided in the attachment.

NRC ROLE UNDER THE NUCLEAR WASTE POLICY ACT OF 1982 AND RESULTING NEW REQUIREMENTS

(All dates specified by the act are keyed to enactment date of January 7, 1983. Dates in parentheses represent one year extensions permitted by Act.)

I. NRC's Role In Repository Development Program

	Provision	Specific Dates	NRC Role
1.	Siting Guidelines promulgated by DOE in which NRC concurs. Section 112(a).	7/6/83	NRC must concur in the DOE siting guidelines. Actions That Have Been Taken By NRC On February 14, 1983, DOE issued draft guidelines for public review and comment, and has published the schedule for public meetings. NRC and DOE have developed a detailed schedule for completing this action. Our technical staff has reviewed the draft guidelines and submitted written comments to DOE on April 7, 1983. Not previously budgeted.

Provision	Specific Dates	NRC Role
2. NRC technical requirements and criteria promulgated. Section 121(b).	1/1/84	NRC must issue regulations which specify the technical requirements and criteria for the repository. Actions that have been taken by NRC These regulations, which have been under development by the staff for several years, have recently been submitted to the Commission for final approval and promulgation as as an effective rule.
3. EPA final high-level waste standards promulgated. Section 121(a)	1/7/84	NRC intends to comment on the draft EPA standards.
4. Conform NRC requirements and criteria to EPA final high-level waste standards. Section 121(b)(2).	After	Depending on contents of the final EPA standard, action may be necessary by NRC to conform NRC regulations.
5. DOE Project Decision Schedule. Section 114(e)	None specified	NRC must coordinate with DOE on the development of the Project Decision Schedule. Not previously budgeted.
6. Draft Mission Plan published by DOE for comments of NRC and others. Section 301(b).	4/7/84	NRC must coordinate with DOE on the development of DOE Mission Plan. And specify, with precision, any objections to the Plan. Not previously budgeted.
7. Submission by DOE of Mission Plan to Congress. Section 301(b).	6/7/84	Following approval of the Mission Plan by Congress, NRC will, wherever necessary, conform its waste management program planning guidance to the Plan.

Provision	Specific Dates	NRC Role
8. DOE recommends to the President 3 sites for characterization for first repository. Each of the initial 5 sites nominated by DOE prior to recommendation to the President will be accompanied by an environmental assessment (EA). Section 112(b).	1/1/85	NRC staff intends to review and comment on EA's. Inadequately budgeted.
9. President must evaluate the possibility of developing a repository to dispose of defense waste only. Section 8.	1/7/85	If decision is to not include defense waste in the civilian repository NRC licensing of a separate defense waste only repository is required.
10. Submission by DOE of site characterization plan, waste form or package description, and conceptual repository design to NRC for review and comment. Section 113(b).	Before sinking a shaft	NRC will review & comment on DOE submission of each site to be characterized. Inadequately budgeted
11. DOE submits to the President and the public the Commission's preliminary comments concerning at-depth site characterization and waste form sufficiency for DOE construction authorization application. Section 114(a)(1)(E).	Before event 13 below	NRC must provide preliminary comments on the adequacy of the at-depth site characterization and waste form sufficiency for DOE construction authorization application. Not previously budgeted.
12. The DOE Final Environmental Impact Statement (EIS) on the first proposed repository must contain comments from the NRC concerning the DOE draft EIS. Section 114(a)(1)(D).	Before event 13 below	NRC will review and comment on the DOE draft EIS.
13. President recommends one site to Congress for construction. Section 114(a)(2)	3/31/87 (3/31/88)	None

	Provision	Specific Dates	NRC Role
14.	Submission of notice of disapproval by State, Section 116(b); or Indian tribe, Section 118(a)	5/30/87 (5/30/88)	None; see 15 below
15.	Congress may obtain any comments of the Commission with respect to a State/tribal disapproval of a site. Section 115(g).	Before event 16 below	The NRC must be cognizant of State/tribal concerns to be in a position to provide knowledgeable comments to Congress. Not previously budgeted.
16.	State disapproval will take effect unless both Houses of Congress pass resolution of approval. (90 calendar days of continuous session.) Section 115(c).	About 8/87 (About 8/88)	None; see 14-15 above.
17.	Within 1 year after site disapproval, the President must recommend an alternative site for the first or a subsequent repository. Section 114(a)(3).	About 8/88 (About 8/89)	Role similar to initial site recommendation. See events 11-15, above.
18.	Secretary submits construction authorization application to NRC. Section 114(b).	About 11/87 (About 11/88)	An NRC licensing proceeding will be initiated on the construction authorization application.
19.	NRC must submit to Congress an annual status report. Section 114(c).	One year after submittal of CA and annually thereafter.	NRC will submit an annual status report on the progress of the licensing proceeding to Congress. Not previously budgeted

	Provision	Specific Dates	NRC Role
20.	Commission must issue decision on issuing construction authorization for first repository. Section 114(d)	1/1/89 or 11/90 or 11/91	3 year time period for NRC decision dictates an active program of involvement with DOE, States/tribes prior to receipt of application to identify and resolve contentious issues to the maximum extent practicable. Commission will either grant or deny authorization for DOE to begin construction of the 1st geologic repository. To meet this schedule, a relatively complete, good quality DOE application will be required.
21.	Secretary must recommend 3 sites for characterization to President for second repository site. Section 112 (b)(1)(C).	7/1/89	Same as event 8 above. Not previously budgeted
22.	President must recommend to Congress 1 site, from sites already characterized, for second repository. Section 114(a)(2)(A).	3/31/90 (3/31/91)	Same as events 10, 11 and 12, above.
23.	Submission of Construction authorization application to NRC for second repository. Section 114(a)(2).	About 11/90	NRC will initiate licensing proceeding for second repository. Not previously budgeted.

	Provision	Specific Dates	NRC Role
24.	Commission must issue decisions on issuing construction authorization for second repository. Section 114(d)	1/1/92 or 11/93 or 11/94	3 year time period for NRC decision dictates an active program of involvement with DOE, States/tribes prior to receipt of application to identify and resolve contentious issues to the maximum extent practicable. To meet this schedule, a relatively complete, good quality DOE application will be required. Not previously budgeted.
	II. NRC's Role In The Test and Evaluation Facility Program		
1.	DOE may issue T&E facility siting guidelines Section 213(a)	7/7/83	NRC will provide consultation to DOE on its T&E siting guidelines. Not previously budgeted.
2.	NRC, DOE must conclude written agreement on procedures for T&E facility interaction Section 217(f)(1)	1/6/84	NRC must work with DOE in developing a written agreement for procedures for review, consultation, and coordination in the planning, construction and operation of the T&E facility. Such an understanding shall also establish the types reports and other information as the Commission may reasonably require to evaluate health and safety impacts of the T&E facility. Not previously budgeted.

	Provision	Specific Dates	NRC Role
3.	NRC shall carry out a continuing analysis of the T&E activities to evaluate the adequacy of the consideration of public health and safety issues. Section 217(f)(3)(A).	None specified	NRC will carry out a continuing analysis of the activities associated with the DOE T&E facility. Not previously budgeted
4.	NRC required to report to the Secretary, the President, and the Congress Section 217(f)(3)(B).	As Required	NRC will report to the President, the Secretary, and the Congress as it deems appropriate pursuant to the Act. Not previously budgeted.
5.	NRC must concur on decontamination and decommissioning of DOE's T&E facility Section 217(h)	5 Years After Initial Operation	NRC will evaluate DOE's decontamination and decommissioning activities, and concur, if deemed appropriate for a T&E facility not located at the site of a repository. Not previously budgeted.
	III. NRC's Role for Interim Spent Fuel Storage		
1.	The Secretary, the Commission, and other authorized federal officials shall each take such actions as such officials consider necessary to encourage and expedite the effective use of available storage, and necessary additional storage, at the site of each civilian nuclear power reactor. Section 132.	No specific dates	The Commission will consider which actions are necessary to implement the intent of this provision. Not previously budgeted

	Provision	Specific Dates	NRC Role
2.	Hybrid procedures are prescribed for hearings on certain applications for licenses for facility expansions of spent fuel storage capacity and transshipments of spent fuel. Section 134.	Not specific but applicable to applications filed after 1/07/83.	Actions That Have Been Taken By NRC NRC is in the process of developing procedures for such a Hybrid hearing. Not previously budgeted
3.	Issuance of NRC proposed rule establishing procedures and criteria for making the determination that onsite storage cannot reasonably be provided at a reactor and that the person owning and operating the reactor is diligently pursuing licensed alternatives to the use of Federal storage capacity. Section 135(b) and Section 135(g).	4/7/83	NRC will issue a proposed rule establishing procedures and criteria for determining use of Federal storage capacity. (After public comment NRC will issue a final rule.) Actions That Have Been Taken By NRC The Commission has approved the proposed rule for public comment. Not previously budgeted.
4.	If the NRC determines that onsite storage cannot reasonably be provided at a reactor by the licensee DOE may, under certain conditions, provide not more than 1900 metric tons of capacity for storage of spent nuclear fuel from civilian power reactors. Section 135(a)	Not specific	NRC will make public health and safety determinations as to the use of any existing DOE facility for spent fuel storage and will license storage in new structures, including modular or mobile spent nuclear fuel storage equipment such as dry casks, as required under this provision of the Act. Inadequately budgeted.

	Provision	Specific Dates	NRC Role
5.	Transportation of spent nuclear fuel to a DOE storage facility shall be subject to licensing and regulation by NRC and by the Department of Transportation. Section 137(a).	Not specific	NRC is required to review DOE's applications for shipment and make licensing determinations for health and safety and safeguards. Not previously budgeted.
6.	DOE, in providing for the transportation of spent nuclear fuel under this Act, shall utilize by contract private industry to the fullest extent possible in each aspect of such transportation. Section 137(b)	Not specific	NRC will be required to review the private contractor's application for shipment, and make licensing decisions for health and safety and safeguards. Regulations may, at a future date be modified or revised, to conform with DOE's repository program. Not previously budgeted.
7.	NRC shall, by rule, establish procedures for the licensing of any technology approved by the by NRC under Section 218(a) for use at the site of any civilian nuclear power reactor. [Section 133.] Error exists in Act where reference is made in Section 133 to Section 219(a). Under Section 218(a), NRC may, by rule, approve one or more dry storage spent fuel storage technologies for use at the sites of civilian nuclear power reactors, without to the maximum extent practicable, the need for additional site-specific approvals.	Not specific	NRC, using data and information from DOE dry storage demonstration and cooperative programs, will develop regulations to approve dry technology storage at civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site specific approvals by the NRC. Inadequately budgeted.

	Provision	Specific Dates	NRC Role
IV.	NRC's Role In Monitored Retrievable Storage Program		
1.	DOE shall consult with the Commission and EPA and shall submit their comments on the MRS proposal to Congress. Section 141(b)(3).	06/01/85	NRC will consult with DOE on development of the MRS proposal, and provide comments to DOE for submittal of the proposal to Congress. Not previously budgeted.
2.	Submission by Secretary of an environmental assessment with respect to the MRS proposal to Congress. Section 141(c)(1).	06/01/85	NRC may, if it deems appropriate, comment to DOE on this environmental impact assessment (EA). Not previously budgeted.
3.	DOE shall file for license with NRC for MRS Section 141(d).	Subject to Congressional authorization of MRS.	NRC will develop amendments to 10 CFR Part 72 to provide the licensing framework for the MRS, if it should be authorized by Congress. If authorized NRC will review DOE's application and make the necessary licensing determinations. Not previously budgeted.

Provision	Specific Dates	NRC Role
V. NRC's Role In The Low-Level Waste Management Area		
	(No deadlines were provided in the Act for the LLW management provisions under Section 151.)	
1. Commission authorized to establish by rule, regulation, or order such standards and instructions as it deems necessary or desirable to ensure that each LLW disposal licensee will have adequate financial arrangements for decontamination, decommissioning, site closure and reclamation of sites, structures, and equipment used in conjunction with its LLW disposal. Section 151(a)(1).		New sites are covered by existing regulations (10CFR61). NRC will review existing regulations and guidance for application at the existing commercial LLW disposal sites and for any needed changes for new sites. Not previously budgeted.
2. If Commission determines that long-term maintenance or monitoring will be necessary at a LLW disposal site, Commission must ensure before termination of the license that the licensee has made adequate financial arrangements to ensure that any needed long-term maintenance or monitoring will be carried out by the person having title and custody for such site following license termination. Section 151(a)(2).		May require rulemaking by the Commission and the development of guidance for both existing and new commercial LLW disposal sites. For existing sites, analyses will be required to assess long term performance; monitoring and long term maintenance requirements; associated costs; and the program to review monitoring data to identify the need for mitigative actions. Not previously budgeted.

	Provision	Specific Dates	NRC Role
3.	DOE shall have the authority to assume title and custody of LLW and the land on which such waste is disposed of, upon the request of the owner of such waste and land following termination of the license issued by the Commision for such disposal, if (1) the Commission determines that the requirements for site closure, decommissiong and decontamination have been met with pursuant to Section 151(a); (2) that such title and custody will be transferred to the DOE without cost to the Federal government; and that Federal ownership and management is necessary, or desirable to protect the public health and safety. Section 151(b).		Likely to require rulemaking/guidance to provide basis for required Commission determinations. Such rulemaking/guidance would require close coordination of DOE who appears to have independent discretion to accept sites following Commission determination. Not previously budgeted
4.	Adequate financial arrangements for long-term maintenance and monitoring, as well as decontamination and stabilization of special sites must be met in accordance with requirements established by the Commission before DOE may assume title and custody of the waste and the land on which it is disposed. Section 151(c).		Similiar to event 3, above. Not previously budgeted

IV. NRC's Role Relating to Other Provisions In The Act

	Provision	Specific Dates	NRC Role
1.	Within 90 days of the enactment of the Act, DOE and NRC must publish a joint notice in the Federal Register stating that the U.S. is prepared to cooperate and provide technical assistance to non-nuclear weapon states. This joint notice is to be updated and reissued annually for 5 succeeding years. Section 223(b).	4/7/83	NRC will prepare a joint Federal Register notice and will provide technical assistance to non-nuclear weapon states pursuant to the Act and the FR notice. Actions That Have Been Taken By NRC The staff have prepared a proposed FR notice, coordinated it with DOE, and it was published in the Federal Register on March 30, 1983. Not previously budgeted.

	Provision	Specific Dates	NRC Role
2.	The Commission shall not issue or renew a license to use a utilization or production facility under Section 103 or 104 of the Atomic Energy Act unless the applicant has entered into a waste disposal contract with the Secretary of Energy or the Secretary affirms in writing that the licensee is negotiating in good faith to enter into such a contract.	6/30/83	The NRC and DOE are still examining what the provisions mean and how they will be applied.
	The NRC in its discretion may require as a precondition to the issuance or renewal of a reactor license that the applicant shall have entered into an agreement with DOE for the disposal of high-level waste or spent fuel that may result from such a license. Section 302(b)(1)(B).		Not previously budgeted
3.	DOE shall consult with the Chairman of the NRC in conducting a study of alternative approaches to managing construction and operation of all civilian waste management facilities and then DOE is to report to Congress. Section 303.	1/6/84	At the invitation of the Secretary, the Chairman will consult on the "alternative approaches" study.
4.	The Act requires and authorizes NRC to promulgate regulations or other suitable Commission guidance for the training and qualifications of civilian nuclear powerplant personnel. Section 306.	1/6/84	NRC will develop and promulgate regulations or other suitable guidance for training and qualifying civilian powerplant reactor personnel required to be implemented by the Act. Inadequately budgeted.

QUESTION 17. Please outline briefly the steps being taken to assure coordination between NRC and DOE efforts.

ANSWER.

The coordination of NRC and DOE efforts on the Nuclear Waste Policy Act (NWPA) activities has received the priority attention of both agencies, and will continue to do so. Communication lines between our working level staffs were established shortly after enactment of the NWPA; staff in both agencies being specifically detailed for this purpose. Mr. Robert Morgan, Director of DOE's Nuclear Waste Policy Act Project Office, and Mr. John G. Davis, Director of NRC's Office of Nuclear Material Safety and Safeguards, are their agency's focal points for coordination of activities under the Act, and have been personally involved in making sure that this coordination remains effective.

One result of this interaction has been the timely publication of the joint NRC/DOE Federal Register notice concerning technical assistance to non-nuclear weapon states in the field of spent-fuel storage and disposal. This notice was signed by Chairman Palladino and Secretary Hodel, and published on March 30, 1983, in advance of the Act's required date of April 7.

Under the Act, DOE is required to prepare a Project Decision Schedule (Sec. 114) and a Mission Plan (Sec. 301) in cooperation with affected Federal agencies. NRC is staying in close touch with DOE's progress on these documents which will serve as the formal focus for the coordination of all agency activities.

Question 18. On page 6 of your statement, you refer to the "disparity in quality assurance effectiveness among the utilities constructing nuclear power plants." What changes were made in the quality assurance program to overcome this problem?

ANSWER.

NRC has underway a number of initiatives aimed at enhancing quality assurance in the nuclear industry. These initiatives may be grouped into four categories: (1) near term actions affecting licensees nearing the operating license issuance stage; (2) intermediate term actions affecting the NRC routine inspection program; (3) longer term actions affecting NRC's future policy and programs; and (4) NRC organizational actions affecting NRC's QA program. Each of these categories is discussed as follows:

(1) Near term actions affecting licensees nearing the operating license issuance stage have included: (a) an NRC requested licensee evaluation of the effectiveness of the QA program for the design and construction of the facility and a certification that the facility has been designed, constructed and tested in accordance with the Final Safety Analysis Report and other licensee commitments; (b) an expanded evaluation and retrospective review of the licensee's construction performance, including quality of performance, performed by NRC regional inspection staff on each applicant for an operating license prior to license issuance; (c) on a case by case basis, NRC may request applicants for an operating license to have an independent design review and verification conducted for specific structures, systems, or components.

(2) Intermediate term actions affecting the NRC routine inspection program include: (a) revision of inspection procedures to focus more on the areas of highest inspection priority; (b) an increase in the inspection effort allocated to each plant under construction; (c) construction appraisal team (CAT) inspections on selected plants which supplement the routine single inspector oriented program and provide a more comprehensive, indepth look at a licensee's construction performance, particularly with respect to hardware; (d) development of a new inspection procedure (Integrated Design Inspection) to provide an indepth examination, on selected plants of the design, engineering, and design control programs for a nuclear construction project; and (e) the development of a computerized capability to analyze construction event reports.

(3) Longer term actions affecting NRC's future policy and programs are principally focused on the Congressional requirements for quality assurance studies and pilot programs contained in P.L. 97-415, Section 13 (NRC's Authorization Act of 1983). The report and recommendations from the studies are due to Congress in the Spring of 1984. These studies will examine successful quality assurance programs in the nuclear industry and the contrasts between them and less than successful programs, quality programs outside the U.S. nuclear industry, and other alternative programs and approaches to quality and the assurance of quality.

(4) NRC organizational actions affecting NRC's QA programs include the consolidation of all headquarters components having QA programmatic responsibility into a single unit within the Office of Inspection and Enforcement (IE). The new IE Quality Assurance Branch has agency responsibility for QA licensing, QA research and standards development, QA inspection program development and appraisal, and for NRC's QA initiatives.

CONCLUSION OF HEARINGS

Chairman HATFIELD. Are there any other comments?

Thank you, very much, for your testimony.

We will recess now until the call of the Chair.

[Whereupon, at 3:05 p.m. Wednesday, April 13, the hearings were concluded and the subcommittee was recessed to reconvene at the call of the Chair.]

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